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Registration of Indian Medical Practitioners

The question of Registration of Indian Medical Practitioners has been engaging the attention of Government and Indian Medical men as well. In dealing with this subject there are certian facts that have to be taken into consideration before one comes to an unbiased decision. The Indian Medical Practitioner has been ministering for a long time to the Medical needs of over 90% of the Indian population partly because of the inadequacy of doctors trained in other systems and greatly because Indian Medicince are more congenial to the soil and Prakriti of the patient than foreign imported medicines. Hence the Indian Medical practitioner will always be a potent factor and deserves the sympathetic consideration of any one that sits to consider and decide his status in Medical profession. Though Indian Medical men have been practically useful to the people of India since very long, they may be said to have been in the oblivion till late 'Vaidyaratna' Pandit D. Gopalacharlu brought out the efficacy of the Ayurveda and showed to the country that Indigenous Medicine is in no way infereior to any system of Medicine, if not superior to it. With a view to advance the cause of Indigenous Medicine he opened the Madras Ayurvedic College, and trained students with a four years course in practice and theory of Ayurveda. Students trained in that College are now working as physicians in Local Fund and Municipal

Dispensaries and some of them are professors in Government school of Indian Medicine. To satisfy Medical needs of the Country, some more colleges sprang up after the type of the Madras Ayurvedic college with a four years course in Bezwada, Thirupathi etc.

Prior to the opening of the Government school of Indian Medicine it was the Madras Ayurvedic College and a few other colleges that were training students in indigenous medicine. The way in which the students of those colleges run the dispensaries under their charge is quite satisfactory and is in no way inferior to the Rural dispensaries that are in charge of the L. I.M's or L.M.P's. So is it not reasonable and just that at least all those students that under-went a four years course in the said colleges before the first batch of L.I.M's came-out should be registered in the same class with L.I.M's? By doing so the "Self-respect and Dignity" of the L.I.M's, will in no way suffer.

Again there is another class that pass All India Ayurveda Vidyapeeth Examinations by private study and a third one that practise Medicine without any study but practise only by hereditary Profession. The last class cannot be easily ingnored, for even at present, it is they that are looking to the Medical needs of over 50% of our countrymen. Among them there are some that are successfully competing even with the Medical Practitioners (Allopathic or Indian Medical) employed in the L.F. and Municipal and Rural Dispensaries opened in the Rural areas. There is no use shutting our eyes to hard facts before us but one has to boldly face them and give a fair and unbiassed decision. So such Practitioners have to be classed as third class practitioners and they should be allowed to practise as they have been doing. In the initial stages of Registration, one has to put up with certain difficulties, as quacks that practise Medicine do more harm than good to the people. No doubt, such practitioners have to be discouraged but, as there is no practical method by which such practitioners can be eliminated from the really worthy people they have to be a necessary evil to the society for some time to come. For the present, therefore, all such practitioners that practise Medicine by private study and by heredity should be registered as third class practitioners without any privilege of the first and second classes except that of practising medicine. So, it is better that the Registration of Indian Medical Practitioners should be under three classes as follows :—

That is, the first class should consist of medical practitioners holding Government Certificates after a course of training of not less than four years.

2nd class should consist of Diploma Holders from private institutions recognised by the Board of Indian Medicine to be established. The private institutions shall include All India Ayurveda Vidya Peeth and all other institutions that give a training of *four* years theoritical and clinical according to a circular approved by the Board of Indian Medicine.

The third class include all Indian Medical Practitioners of ten years standing on the date of introduction of the Medical Registration Act.

SOY FLOUR AND RICKETS

Writing in the *Monatsschrift fur Kinderheilkunde* (Berlin), Dr. H. Bischoff explains that in the preparation of flour from soy beans, the oil or fat is largely removed, but the protein content is kept as high as possible. Analysis of soy protein flour shows that of the mineral substances phosphoric acid is present in large quantities. This is due to the high lecithin content of the bean. It has been found that the antirachitic action of soy flour is not due to its vitamin D content, for only vitamins A and B can be found. However, experimental rickets in rats have been counteracted by means of the addition of soy flour to the food. Since it is known that in rickets there is a disturbance in the phosphorus metabolism, and also that the phosphorus content of soy flour is high, Dr. Bischoff assumes that the curative action of soy flour in rickets must be due to its high phosphorus content.

Original Articles

YAKSHMA OR TUBERCULOSIS IN AYURVEDA

BY

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Calcutta.

(*Continued from our last issue*)

In Allopathy, Pulmonary Tuberculosis *i.e.* phthisis is diagnosed by auscultation which reveals physical signs which are generally dullness over one lobe, increased vocal fremitus and enfeebled bronchial respiratory murmur and outward manifestations constitute sudden onset of pains in one side with short dry cough, scanty or rusty sputum, rapid respiration and fluctuating temperature. Sometimes the disease is mistaken for lobar Pneumonia of the apex. Diagnosis would become rather vivid after a week or so when no sign of crisis is marked and also from indication of the tongue which appear less dry than in Pneumonia. Profuse sweat, emaciation and purulent expectoration are the leading symptoms of phthisis. Development of cavities in the lungs is concluded from the clicking rales. The presence of Tubercular Bacilli in the sputum is conclusive for diagnosis of this disease, as has already been said before. The disease begins generally at the apex of the upper lobes. Cavities of varied shapes are almost always present. Pleural effusion may be found on either sides of the chest. Bronchial glands, larynx and intestines are favourite sites for the affectation of the disease. The heart is very often atrophied. Hæmoptysis is one of the earliest symptoms of the disease.

In Allopathy, chief medicines are Cod Liver Oil and Creasote (Emulsion form).

Tuberculin is another remedy of choice but there is serious danger to the patient from the administration of Tuberculin, so that this preparation ought not to be employed by the physician excepting the experts in its preparation and administration.

To arrest hæmorrhage, Emetine Hydrochloride ½ grain hypodermically is given more than once a day. Calcium Lactate with solution of Lime is of some value in the early stage of the disease.

Sodium Morrhurate, compounds of Arsenic and Mercury are extolled by some physicians as being curative while these have been pronounced worthless by others.

Arsenic and Creasote etc. have their advocates but their results are doubtful according to Captain A. Gupta of Howrah General Hospital ; vide July 1925 issue of Indian Medical Record.

Calcium treatment is meant for replacement of the Calcium contents of the system lost but the writer is of opinion that the defect in the system lies not in the want of supply of Calcium but in its retention and proper utilization.

The use of Cod Liver Oil in the treatment of Tuberculosis in Allopathy is widely in vogue ; the object being to improve the nutrition of the patient and to increase his power of resistance to fight the disease, but there are cases who did not tolerate Cod Liver Oil.

Preparation of gold is now being tried and it is under experiement and there is no authoritative data to be commented upon.

It is evident from the above that a real remedy for Tuberculosis in Allopathy has yet to be explored.

In the absence of a specific treatment for Tuberculosis, the Allopaths usually have to rely on the hygienic measure, nourishing food, plenty of air and light to combat with this fell disease.

In some cases of Yaksha, the distressing dry cough persists due to throat troubles and as such the throat should not be overlooked. The troubles of throat would generally disappear on the discriminate administration of either of the *Churnas* or *Abalehas*.

In this connection I would state for the information of the medical profession that I treated some cases of phthisis in advanced stages with the following medicines to my satisfaction.

In the evening Sarbangasundara Rasa with honey and Extracted Juice of Vasaka root.

If there is haemorrhage with rapid emaciation, Raj Mriganka Rasa or Raj-Jakshmamrita with honey and Ayapan (Eupatorium) leaf juice.

The recipes of Sarbanasundara has already been described and I would therefore expound the preparation of Raja Mriganka Rasa and Raja Jakshamrita.

Recipes of Rajmriganka Rasa :—

रसभस्म तयोभागा भागैकं हेमभस्मकम् ।
मृत ताम्रस्य भागैकं शिलाताल गन्धकम् ॥
प्रति भागद्वयं शुद्धमेकीकृत्य विचूर्णयेत् ।
वाराटी: पूरयेत् तेन चाजाक्षीरेन टङ्कनम ॥
पिष्ट्वा तेन मुखं रुद्ध्वा मृद्भाण्डेतत् निरोधयेत् ।
शुष्कं गजपुटे पाच्यं चूर्णयेत् स्वङ्गशीतलम् ॥
रसोराज मृगाङ्कोऽयं चतुर्गुञ्ज क्षयापहः ।
दश-पिप्पलिकैः क्षौद्रे मरिचै चोमविंशकैः ॥
सघृतै र्दापयेद् वाथ वातश्लेष्मोद्भव क्षये ॥

Rasa-sindur—(Sulphide of Mercury)	...	...	3 Tolas
Reduced gold—(Aurum)	...	...	1 ,,
Reduced Copper—(Sulphate of Copper)		...	1 ,,
Purified Shilajatu	...	...	2 ,,
Purified Harital—(Yellow Sulphurte of Arsenic)		...	2 ,,
,, Sulphur	...	...	2 ,,

Rub the above together in a mortar and put it into Big *Karis* (Couch shell), then make a mass of purified Borax (Sohaga) rubbing in goat's milk. Then again the opening of the *Karis*, filled in with the pulv of the above ingredients, should be closed with the mass of borax prepared separately. The *Karis* then should be put in a crucible which should be covered with plaster of clay and when dried the crucible should be burnt in *Gajaputa* process and when it cools down the contents should be taken out of the crucible well rubbed in mortor for medicinal use. Dose for adults is 4 ratis or 8 grains once a day with honey and ten long pepper or clarified butter and 19 (nineteen) black pepper.

Besides the above medicines the following medicines are useful in Yaksha and should be tried when indicated :—

1. Mahavra Batika
2. Kanchanavra Rasa
3. Chandramrita Rasa
4. Kalyanasundara Rasa
5. Ratnagarva Pattali
6. Kasa Lakshmibilasha
7. Amritaprasa Ghreeta
8. Chandanadi Oil
9. Basa Chandanadi Taila

10. Chyabanaprasha
11. Draksharista.

Recipes of Mahavra Batika :—

अभ्रकं पुटितं ताम्रं लोहं गन्धकपारदम् ।
कुनटी टङ्कनक्षारं त्रिफला चै पलं शतम् ॥
गरलस्य तथा माष चतुष्काश्चैव चूर्णयेत् ।
तत्सर्व्वं भावयेदेषां रसैः प्रत्येकशः पलैः ॥
देवराजा शनाख्यस्य केशराजाख्यकस्य च ।
सोमराजस्य भृङ्गाख्य राजस्य श्रीफलस्य च ॥
पारिभद्राग्निमन्थस्य वृद्धदारस्य तुम्बरोः ।
मण्डुकापर्णी निगुण्डी पूतिकोन्मत्तकस्य च ॥
श्वेतापराजिताश्च जयन्त्याश्चार्द्रकस्य च ।
ग्रीष्म सुन्दरकस्य च वृषकस्य रसेन तु ॥
रसैस्ताम्बुलवल्ल्याश्च पलोर्ध्यै भावयेत् पृथक् ।
द्रव्य किञ्चित् स्थिते चूर्णं मरिचस्यपलं क्षिपेत् ॥
ततश्चैव वटीं कुर्य्यान्मात्रां दद्याद् यथोचितम् ।
ज्वरेचवातातिसारेच कासे श्वासे क्षये तथा ॥
सन्निपातेज्वरे चैव विविधे विषमे ज्वरे ।
क्षयरोगेषु सर्व्वेषु चीनशुक्रे च यक्ष्मणि ॥
ग्रहन्यां चिरभूतायां सुतिकायां विशेषतः ।
शोथे शूले तथासाध्ये सावरे चामवातके ॥
मन्दानलेऽवले चैव सकले श्लेष्माजगदे ।
पीनसेऽपीनसे चैव पक्वेऽपक्वे विशेषतः ॥
वातश्लेष्मणि वाते वा विविधेचेन्द्रिय स्थिते ।
वातवृद्धौवृते पित्ते वलासेनावृतेऽपि च ॥
अष्टसूदररोगेषु कुष्ठरोगे प्रशस्यते ।
अजीर्णे कर्णरोगेषु कृशे स्थूले तु यक्ष्मणि ॥
अयं सर्व्वगदेस्वेव रसो वै परिकीर्त्तितः ।
महाभ्रवटीका सेयं परं श्रेष्ठा रसायने ॥

Reduced Mica (Aluminium Silicate) ...	8 Tolas
„ Copper ...	„
„ Iron (Ferrum) ...	„
Purified Sulphur ...	„
„ Mercury (Hydrargyrum) ...	„
„ Manashila (Bi-sulphuret of Arsenic)	„
„ Borax ...	„

Triphala (Three myrabolans)	...	2 tolas
Purified Mitha (Aconite Ferox)	...	"

Rub and mix together in a mortar. Then add juice of Shiddhi, Kesur, Somraji, Biranga, Bael leaf, Palita leaf, Ganiari, Bidharaka, Tumburu, Thulkuri, Nisinda (Vitex Trifolia) leaf, Dhatura leaf, white Aparajita leaf, Jayanti leaf, Gima leaf, Vasaka and betel leaf one after another in serial order. The juice of each of the aforesaid should be taken in 8 tolas weight and unless the juice of one is absorbed another juice should not be added to the mass and at the last moment 8 tola weight of Black Pepper should be added to the mass and rubbed well together and when ready for preparing bolules it should be prepared into pills of one Rati weight. It is useful in Atisar, Puerperal fever, anaemia, emaciation, rheumatism, colic, dropsy, typhoid, articaria and consumption.

Therapeutic actions of the ingredients are as under :—

Reduced Mica—(mainly it is aluminium silicate) is astringent, alterative, aphrodisiac, stimulates metabolic action of tissue cells, indicated in enlarged spleen, urinary diseases, chronic fever, Dysentery, diarrhoea, nervous debility, amæmia, jaundice, asthma consumption, gonorrhœa, leucorrhœa, etc.

For Reduced Copper, Iron, Mercury, Borax and Sulphur, see their action under Sarbangasundara Rasa.

Manashila (Red Orpiment or Bisulphuret of Arsenic)—Alterative, febrifuge, tonic, indicated in cough, asthma and affection of skin.

Triphala (Three myrabolans)—Refrigerent, diuretic, laxative, antiseptic and germicide.

Aconite (Ferox)—Diaphoretic (Swedaneeya), Diuretic (Mutravirachaniya), anti-diabetic, antipyretic, powerful sedative in large doses. It reduces tension and frequency of the pulse and is a sedative for respiratory centre.

Siddhi leaves (Canabis Indica)—Powerful sedative in large doses, intoxicant, stimulant, aphrodisiac, sedative, astringent, disgestive and antispasmodic.

Kesur (Scirpus Grossus)—Astringent, aromatic, and is indicated in diarrhœa, it improves the taste of medicine.

Bael leaf (Aegle marmelos)—Anti-dysenteric, febrifuge, astringent, heart tonic, *Pitta* and *Kaphanasaka*.

Somraji (Scrrafula Anthelmintica)—Anthelmic, stomachic, tonic, diuretic, antiperiodic and alterative ; seed is powerful vermifuge and diuretic.

Palta Leaves (Erythima Indica)—Antacid (Pittyaghna), expectorant, febrifuge, vermifuge, diuretic, laxative, emmanagogue (Rajasthapaneeya), stanyajania (lactagogue), antidote to strychnine and equaminates *vayu* and *kapha*.

Ganiari (Gmelina Arabica)—Demulcent, stomachic, tonic, laxative, Dahanasaka (refrigerent).

Bidharaka (Gmelina Aristica)—Tonic, alterative, Blood-purifier febrifuge, antispasmodic.

Tamburu (Deospyros Melaroxylon)—Astringent, Kaphaghna.

Thunkuri (Colen Aromaticus)—Cathartic (Bhedaniya), stimulant, stomachic, Antispasmodic, antilithic, (Muttrasangrahaniya).

Gima leaves—Bitter, curminative, aromatic, febrifuge, indicated in anaemia, enlarged spleen, equaminates pitta and kapha.

Vasaka (Adhatoda)—Antispasmodic, expectorant, diuretic, alterative for bronchites, asthma, whooping cough etc. It is very useful in haemorrhage and haemoptysis.

Betel leaves—Stimulant, carminative, astringent, aphrodisiac, antiseptic, aromatic, stomachic, febrifuge and kaphaghna.

Recipes of Kanchanabhra Rasa are as under :—

काञ्चनं रससिन्दूरं मौक्तिकं लौहमभ्रम्
विद्रुमञ्चाभया तारं कस्तूरी च मनःशिला
प्रत्येकं विन्दुमात्रञ्च सर्व्वं संमर्द्य यत्नतः
वारिणा वटीका कार्य्या द्विगुञ्जा पलमानतः।
अनुपानं प्रयोक्तव्यं यथादोषानुसारतः
क्षयं हन्ति तथा कासं श्लेष्मपित्तसमुद्भवम्।
प्रमेहान् विंशतिञ्चैव दोषत्रय समर्ज्जितान्।
अशीतिं वातजान् रोगान् नाशयेत् सद्य एव हि।
बलवृद्धिं वीर्य्यवृद्धिं लिङ्गदार्ढ्यं करोति च।
श्रीकरः पुष्टिजननो नानारोग निसूदनः
गहनानन्दनाथोक्तो रसोऽयं काञ्चनाभ्रकः॥

Reduced Gold—(Aurum).
Rasasindur—(Sulphite of Mercury).
Reduced Pearl—(Margarita).
Reduced Iron—(Ferrum).
Reduced Mica—(Silicate of Alluminium).
Reduced Coral—(Coralum Lubrum).
Pulv. Myrobalan.
Reduced Silver—(Argentum).
Musk.

Take equal parts of the above ingredients, rub them well in water, make into a paste and prepare pills of two Ratis each. The pills are to be administered with an indicated adjuvant in accordance with the deranged Dosha of the patient with encouraging results. It is indicated in consumption, Gonorrhoea and in troublesome cough. It is advisable to administer the medicine where Bata and Pitta are not in consistence with the system.

Recipes of Chandramrita Rasa :—

Purified Mercury	2 Tolas
,, Sulphur	2 ,,
,, Borax	8 ,,
Black Pepper	4 ,,
Pulv. Trikatu	1 Tola each
,, Triphala	1 ,, ,,
,, Chai (Canethia theifera)	1 ,, ,,
,, Coriander	1 ,, ,,
,, Caraway seed	1 ,, ,,
,, Rock salt	1 ,, ,,

Add Goat's milk q. s.

Mix well, rub into a paste and prepare pills of 18 grains each.

The pills are of wonderful efficacy in dry throat cough, haemoptysis, asthma, fever with catarrh, dyspepsia, celulities etc. Besides, it is a lung tonic if used with a suitable adjuvant.

Chandramrita Rasa is generally used in dry cough with ginger juice or honey, palm sugar-candy and long pepper powder. In dyspnoea and asthma, it is given with Goat's milk or with Bakapuspa decoction or decoction of Raktotpal (red lotus). It would be given in decoction of Nilotpal, kulathakalai, Mundiri or Kesharaj juice. base in various catarrh diseases with considerable success. But I have noticed that this would be of greater service if the pill of Chandramrita is administered with the decoction of the following herbs :—

Vasaka (Adhatoda)	...	Gr. 48
SatGila (Tinospora Cordifolia)	...	Gr. 48
Bamunhati (Clerodendron Spiniunthus)	...	Gr. 48
Mulathi (Cyperus Rotundus)	...	Gr. 48
Kantakari (Solanum jacquinii)	...	Gr. 48
Aqua	...	one pint.

Boil it over gentle fire, reduce it to 4 oz. and administer the decoction thus prepared after straining through a linen with a little honey. The decoction would expedite the action on the mucous membrane and urinary tract and lung tissues.

Recipes of Basantatilaka Rasa.

हेम्नो भस्मकतोलकं घनयुगं लौहात् त्रयः पारदाश्चत्वारो नियतास्तुवङ्गयुगलञ्चैकीकृतं सर्वतः ।
मुक्ता विद्रुमयो रसेन समता गोक्षुरवासेक्षुणा सर्व्वं वालुकयन्त्रेन परिपचेद् यामं द्विषट्सङ्ख्यकम् ।
कस्तूरीघनसारमर्द्दित रसः पश्चात् सुसिद्धो भवेत् कासश्वाससपित्तवातकफजित् पाण्डुक्षयादीन् हरेत्
शूलादिग्रहणीं विषादिहरणो मेहाश्मरीं विंशतिं
हृद्रोगापहरो ज्वरादिशमनो वृष्यो वयोवर्द्धनः
श्रेष्ठ पुष्टिकरो वसन्ततिलको मृत्युञ्जयेनोदितः ।

080718 विश्वविद्यालय

Reduced Gold (Aurum)	...	1	Tola
„ Mica (Alu : Silicate)	...	2	Tolas
„ Iron (Ferrum)	...	3	„
Prified Mercury (Hydrargyrum)	...	4	„
„ Sulphur ...	...	4	„
Reduced Vanga ...	...	2	„
„ Pearl (Margarita)	...	2	„
„ Coral (Coralum Lubrum)	...	2	„

Mix the above well with juice of Gokshura, Vasaka and Cane-sugar plant and then pour the mass in a bottle and heat it on sand, placed over a pan on fire for 18 hours. The bottle should be covered with a plaster of clay to guard it from bursting, then take out the contents from the bottle when cool and mix 4 tolas each of Musk and Camphor and rub well in a mortar for medicinal use.

The preparation is highly efficacious in wasting diseases, debility and consumption in doses of 4 grains with a suitable adjuvant particularly when there is profuse mucous or mucopurulent expectoration with exhaustion. It is useful in heart diseases and Dysentery as well, when it is used with an adjuvant suitable for the indicated condition of the disease in question.

It is found efficacious in sexual weakness when used with some aphrodisiac adjuvant. It is restorative and preventive of rapid decay of human vitality.

Recipes of Kalyanabhra Rasa :—

वज्राभ्रमेकपलिकं पुटनैः सुजीर्णं धात्रीपयोदबृहती शतमूलिकेक्षु ।
विल्वाग्निमन्थजल वास कण्टकारी श्योनाकपाटलिबलाश्च रसैरमीषाम् ।
संमर्द्दितं पलमितैः पृथगेकाश्च गुञ्जासमा सुवलिता वटीका कृता च ।
यच्चात्ययौ सकल शोषबलासपिण्डं श्वासं समीरमरुचिं सकलाङ्गसादम् ।
शोथं स्वरक्षयमजीर्णमदाहशूलं मेहज्वरं विषमुरोगह पाण्डुहिकाः ।
कार्श्यं क्रिमि बलविनाशनम् अम्लपित्तं प्लीहामयम सहहलीमकमस्रगुल्मम् ।
तृष्णामरातनिचयं ग्रहणीं प्राङ्गुष्ठां विस्फोटकुष्ठ नयनस्य शिरोगदांश्च
मूर्च्छां वमिं विरसतां विनिहन्ति सद्यः कल्याणसुन्दरमिदं बलदम् सुवृष्यम्
मेधा रसायनवरं सकलामयानां नाशाय यच्चनिवेह कथितंहरेत् ॥

Take Reduced Black Mica 8 Tolas.

Then add 2 oz. juice of each of the following, one by one, in serial order given below according to *Vavna* process :—

Amla—(Embelica officinalis).
Mulathi—(Cyprus Rotundus).
Brihati—(Solanum Indicum).
Satamuli—(Asparagus Racemosus).
Ikshu Root—(Root of cane Sugar tree).
Leaves of Bael—(Aegle marmelos).
" Ganiari—(Chelonioides).
Bala—(Pavonia adorata).
Leaves of Vasaka—(Adhatoda).
Kantakari—(Solanum zanthocurpum).
Sona—(Bignoi Indica).
Parula—(Streosperum Suaveoleus).
Barela—(Sida Cordifolia).

It is administered with honey and is indicated in consumption, phthisis, asthma, dropsy, hoarseness, dyspepsia, gonorrhoea, haemoptysis, worms, hysteria, dysentery, skin diseases and in fever with enlarged spleen. It is a stimulant, aphrodisiac and general alterative tonic.

Recipes of Ratnagarbha-pattali :—

समंवज्रं हिमतारं नागं लौहञ्च ताम्रकं
तुल्यांशं तुल्यञ्च तुल्यांशं सप्ताहं चित्रकद्रवैः

मर्द्दयित्वा विचूर्ण्याय तेन पूर्य्या वराटिका:
टङ्कनं रविदुग्धेन पिष्ट्वा तन्मुखमन्धयेत्
मृद्भाण्डे तां निरुध्याय सम्यग् गजपुटे पचेत्।
आदाय चूर्णयेत् सर्व्वं निर्गुण्ड्या: सप्त भावना:
आद्रकस्य रसै: सप्त चित्रकस्यैकविंशति:
द्रव्यैर्भाव्य तत: शोष्यं देयं गुञ्जाचतुष्टयम्
यक्ष्मरोगं निहन्त्याशु साध्यासाध्यं न संशय:।
योजयेत् पिप्पलीक्षौद्रै: सघृतैर्मरिचैस्तथा
महारोगाष्टके कासे ज्वरे श्वासेऽतिसारके
पट्टलीरत्नगर्भोऽयं सर्व्वरोगकुलान्तक: ॥

Rasasindur—(Sulphide of Mercury).
Reduced Diamond—(Pure Carbon Adam).
Reduced Gold—(Aurum).
Reduced Silver—(Argentum).
Reduced Lead—(Plumbum).
Reduced Iron—(Ferrum).
Reduced Copper—(Cuprum)
Reduced Pearl—(Margarita).
Purified Swarnamakshika—(Ferri Sulphuretum).
Reduced Coral—(Coralum Rubrum).
Reduced Conch Shell—(Calcium of Lime).
Purified Copper Sulp.—(Sulphate of copper).

Rub the above in juice of Chita for seven days to powder, then the pulverized ingredients should be put in *Kawries* (Conch shell) and the opening of the cawries should be closed with the paste of Borax, rubbed in Akanda (Mudar) milk. Then the cawries suould be placed in an earthen ware and the pot should be covered with a plaster of mud and when dry, the same should be burnt in *Gajaputa* process. When cool, the crucible should be opened and the contents taken out of the vessel and sudjected to *vavanas* for 21 times in each of Nisinda, ginger and Chita juice and when dry, it should be used for medicinal purpose. Ratnagarbha pattali, thus prepared, should be given with honey and long pepper powder or with honey, black pepper powder and clarified butter to cure pernicious fever, persistent wasting diseases and tuberculosis.

Recipes of Kasa Lakshmibilash :—

शुद्धसूतं सतालञ्च तालार्द्धं रसखर्परम्।
वङ्गं ताम्रं घनं कान्तं कांस्यं गन्धं पलं पलम् ॥

केशराजरसेनापि भावना दिवसत्रयम् ।
कुलत्थस्य रसेनाथ भावयेच्च पुन:पुन: ।
एलाजातीफलाख्यश्च तेजोप्यत्रलवङ्गकम्
यमानी जीवकश्चैव त्रिकटु त्रिफला समम् ।
नतं भृङ्गं वंशगर्भं कर्षमात्रञ्च कारयेत् ।
भावयेच्च रसेनाथ गोलयेत् सर्व्वमौषधम्
तत्पश्चात् वटीका कार्य्या चनकप्रमिता तथा
शीताम्बुना पिवेद्धीमान्स्वकासनिवृत्तये
मत्स्यं मांसं तथा चीरं पथ्यं स्यात् स्निग्धभोजनम्
चयंकासं तथा श्वासं ज्वरं हन्ति न संशय: ।
हलीमकं पाण्डुरोगं शोथं शूलं प्रमेहकम्
अर्शोनाशं करोत्येव बलवृद्धिञ्च कारयेत्
कामदेवसमं वर्णं तृष्णारोचकनाशनम् ॥

Reduced	Vanga—(Stanum) ...	... 8 Tolas
,,	Copper—(Cuprum) ...	... ,,
,,	Mica—(Alluminium Silicate)	... ,,
,,	Iron—(Ferrum)	... ,,
,,	Bell Metal	... ,,
Purified	Mercury—(Hydrargyrum) ...	... ,,
,,	Sulphur	... ,,
,,	Harital—(Yellow Sulphuret of Arsenic)	... ,,
,,	Kharpar—(Black Jack) ...	... 4 Tolas

Mix well above and add juice of Keshuria and decoction of Kulathakalai, each for three times in *Vavana* process. Then take out the mass and add to it the following recipes :—

Pulv	Elachi—(Large Cardamum) ...	... 2 Tolas	each
,,	Nut Meg	... ,,	,,
,,	Tejpatra—(Folia malabuthy)...	... ,,	,,
,,	Cloves	... ,,	,,
,,	Ajwan	... ,,	,,
,,	Caraway Seed	... ,,	,,
,,	Trikatu	... ,,	,,

त्र्यूषणं दीपनं हन्ति श्वासकासत्वगामयम्
गुल्ममेहकफ स्थौल्यमेदं श्लीपदपीनसान् ॥

,,	Triphala	... ,,	,,

त्रिफला कफ पित्तघ्नी मेहकुष्ठहरा सरा ।
चक्षुष्यादीपनीरुच्या विषमज्वरनाशिनी ॥

Pulv	Tagarpaduka	2 tola each
,,	Cardamom	,, ,,
,,	Bansalochana—(manna of the Bamboo) ...	,, ,,

Then again mix these with the mass and add juice of Kesuria and decoction of Kulathakalai in *Vavana* process; rub well together and prepare pills of pea like shape for use. It could be given in cold water alone and is useful in haemoptysis, consumption, asthma, fever, anaemia, dropsy, colic, piles and in gonorrhœa. This medicine is a good tonic and aphrodisiac. Fried articles and greens, highly spiced food and indigestible articles should be avoided.

Recipes of Amritaprasha Ghreeta.

जीवकर्षभकौ वीरां जीवन्तां नागवंशटीम् ।
चतस्र:पर्णिनीर्मेदे काकली द्वे निसिग्धकै ॥
पुनर्नवे द्वे मधुकमथगुप्तां शतावरीम् ।
ऋद्धिं परूषकं भार्गीं मृद्वीकं बृहतीं तथा ॥
शृङ्गाटकं त्वामलकीं पयस्यां पिप्पलीं बलाम् ।
वदराचोटखर्ज्जुर वातामाभिषुकाण्यपि ॥
फलानि चैवमादीनि कल्कान् कुर्व्वीत कार्षिकान् ।
धात्रीरसविदारीक्षु-च्छागमांसरसं पय:
दत्त्वा प्रस्थोन्मितान् भागान् घृत प्रस्थं विपाचयेत् ।
प्रस्थार्द्धं मधुन:शीते शर्करार्द्धतुलां तथा
पलार्द्धकञ्च मरिचत्वगेलापत्रकेशरात् ।
विनीय चूर्णितं तस्माल्लिह्यान्मात्रां सदा नर: ॥
अमृतप्राशमित्येतन्नराणाममृतं घृतम् ।
सुरामृतरसप्रख्यं क्षीरमांसरसाशिन: ॥
नष्टशुक्रक्षतक्षीणदुर्व्वलव्याधिकर्षितान् ।
स्त्रीप्रसक्तान् कृशान् वर्णस्वरहीनांश्च बृंहयेत् ॥
कासहिक्काज्वरश्वासदाहतृष्णास्रपित्तनुत् ।
पुतदं वमिमुर्च्छाहृद-योनिमुत्रामयापहम् ॥

For Kalkartha :—

Jibaka Risava ...	2 Tolas
Salpani—(Desmodium Gangeticum). ...	,,
Jeebanti (Dendrobinum) ...	,,
Ginger (Zingiber officinalis) ...	,,
Shoti (Curcuma gedonaria) ...	,,

Chakule—(Hemionites cordifolia).	2 tolas
Mugani (Phaseolus Trilobus)	„
Masani (Teramuns Lebialis)	„
Meda (Gymnema Auranticum)	„
Mohameda	„
Kakoli (Gymnema Calsamicum)	„
Kshirakakoli (Gymnema Lactiferum)	„
Kantakari (Solanum Zanthocarpum)	„
Brihati (Solanum Indicum)	„
White Punarnava (White Hogweed)	„
Red Punarnava (Red Hogweed)	„
Jaistamadhu (Liquorice Root)	„
Alkusi Bij (Mucana Pruriens)	„
Satamuli (asparagus Racemosus)	„
Riddhi	„
Phalsa (Grewia Asiatica)	„
Bamunhati—(Clerodendron Siphonanthus).	„
Kishmis (Raisin)	„
Brihati (Solanum Indicum)	„
Paniphal (Trapadispinosa or water Calteof)	„
Bhui Amla	„
Black Bhumi Kusmanda (Ipomoea digitata)	„
Long Pepper (Piper Longum)	„
Berela (Sida cordifolia)	„
Kul (Jujube, Plum)	„
Akrot (Walnut)	„
Khejur (Phoenix Montena)	„
Badam (Almond, sweet)	„
Peshta	„
Amlaki Juice (Embelic officinalis)	4 seer
Bhumikusmanda juice (Ipomoea digitata)	4 seer
Cane sugar plant juice	4 seer
Meat juice of goat	4 seer
Cow's Milk	4 seer
Clarified butter	4 seer
Sugar	6¼ seer

(*To be continued.*)

THE ARYAN EMBRYOLOGY

By

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(*Continued from our December issue*)

Plural and Certain un-natural births explained.

The phenomena of unnatural and twin productions have not escaped enquiry of the Ayurvedists of bygone times. Susruta holds the probability of conception without actual coition but by simple influence of dreaming as if a woman had a coitus with a man during her ritu-kala. It is held that as a sequence of such a dream, her Artava is dislodged from its specific seat and is transmitted into her uterus where it begins to develop even without the association with Sukra. He, in a like manner, suggests the possibility of conception as a result of coitus between two women by the admixture of their two artavas in either womb. In these two circumstances it is believed that due to the absence of the paternal principle, the developed foetus will only be a mass of flesh with the absence of the respective parts that develop from it and is not permeated by the entrance of soul as it does not aquire all the characters of a physical body and thus the causes of certain un-natural serpentlike, scorpionlike and other shapeless fleshy productions are explained in which instances the woman as well as her production is treated as sinful.

The causation of twins has been attributed to the division of the seed into two portions by the action of Vayu and the sex of the foetuses is determined in accordance with the predominance of either the sukra or artava in each portion. When the seed is divided into two portions in which sukra predominates in each, then the resultant foetuses are of male sex and if artava is in dominance in each portion, they are feminine which are probably of *Uniovular* variety that develop as a result of cleavage of the blasto-dermic vesicle which may be attributed to the action of bodily Vayu. But when the seed is divided into two such portions in which one is dominated by Artava and the other by sukra, then two different sexes of foetuses develop, as in *binovular* variety in which case they develop from the fertilisation of an ovum with two nuclei. On extreme excitement if Vāyu divides the seed into several portions, then as many children are brought forth as the member of such portions, each influenced by his or her own deeds in previous existence with or without different sexes according to the distribution of Sukra and artava in each portion.

The development of the various tissues of the body.

The physical body is held to be a mere conglomeration of innumerable exceedingly subtle atoms which are beyond the ken of our senses which are united and dis-united with each other by the action of Vayu, the acts of previous births and nature. In the seed, from which the body develops, it is said that there are particular portions from which particular limbs grow. The maternal nucleus contributes to the development of skin, blood, flesh, adeps, navel, heart, lungs, liver, spleen, breasts, pelvis, intestines, stomach, marrow and all other soft parts, while the paternal nucleus takes up the function of contributing and developing hairs, nails, bristles of the body, teeth, bones, nerves, sinews, arteries, semen and some other hard parts.

Therefore the skeleton which is of a mesodermal origin, the nervous system which is a form of ectoderm, the circulatory system (to the exclusion of blood and heart) which the mesoderm forms, the appendages of the skin as hairs, nails etc. which owe their development from the ectoderm and the sinews, one of the connective tissues, which is also of mesodermal origin, all develop from the paternal elements in the seed. The true skin, the blood which makes its first appearance in the angioblast *i.e.* between the entoderm and mesoderm of the yolk sac; the flesh, the voluntary portion of which is said to develop from the myotomes of the primitive segments and the involuntary that is derived from the splanchnopleure of the mesoderm, the heart that springs from the splanchnopleure of the pericardial area as a pair of tubular vessels in its rudimentary stage which is also of mesodermal origin, the digestive tube, the liver that arises from the ventral surface of the fore gut, the spleen which develops from a localised thickening of the mesoderm, the respiratory organs etc. all owe their germination from the maternal principle in the seed. Therefore to a little extent it can be expressed with doubt of certainity that from the paternal element in the seed are formed a great number of the mesodermal developments and from the maternal portion to a greater extent the mesodermal formations and from each certain of the entodermal origins.

The following description given in the Ayurvedic texts with respect to the origination of the various members and tissues of the organism may seem to be imaginary but yet worthy of mention. The skin is formed from the layer enveloping the seed which is under a process of rapid transformation, in the manner as layers of cream originate and deposit on the surface of the milk that has been boiled. The liver and the spleen of the foetus originate from the blood, and from the froth of the blood originate the lungs, while large intestines develop from its impurites. The essential and chief parts of blood and Kapha are concocted by Tejas into which Vayu has entered from intestines and bladder. From the essential parts of blood, Kapha and flesh, the tongue is formed. Vayu with the aid of a proper degree of Pitta differentiates the soft parts and forms ducts and channels while coursing through flesh it forms different muscles. Vayu, entering into soft parts, forms the various receptacles, as stomach and kidneys, which owe their origin to the essence of blood. From the pure parts of flesh, blood, Kapha and fat are formed the testicles and their appendages. Vayu, by removing the oily principles of fat, transforms them into two different tissues, the underbaked ones into seras and the overbaked into snayus. Out of the essence of blood and Kapha, heart, the seat of consciousness, to which are attached the many vital principle-carrying vessels, is formed.

The Panchabhutas and their function in the development of the foetus.

The primary elements, namely the Panchabhutas also partake in the process of development of the embryo. *Prithvi* devotes itself in the formation of species; *Ap* keeps the embryo in a moist condition while *Tejas* looks after the general metabolism of the growing tissues and *Vayu* concentrates upon the proper division of the *Doshas*, *Dhatus* and *Malas* and various *Angapratyangas* from each other and *Akash* contributes its share in the development and creation of proper accommodation to the foetus. It is held that the organs and limbs of the foetus that are derived from the maternal and paternal nuclei are only the modifications of these five primal essences. Amongst such organs of the foetus, the organs of scent, heaviness, compactness and bulk of the body have *Prithvi* for their essence. Juices, the organs of taste, coolness, softness, oiliness and all liquid and semi-liquid secretions are those which have *Ap* for their essence. Those which have *Tejas* for their essence are the senses of vision, visibility, digestion and heat while touch, the organs of touch, roughness, respiration, the development of the various ingredients of the organism and all movements of the body are said to be those that have *Vayu* for their essence. Sound, the organs of hearing, lightness, subtlety and vacant cavities within the body are held to be those that have *Akash* as their essence. For the various colours of the skin, it is said that *Tejas* is the responsible agent in combination with bodily elements at the time of conception. If it happens to be predominated by *Ap*, it gives a fair complexion to the skin of the embryo; when mingled with a large quantity of *Prithvi* and *Vayu*, it imparts a dark coloration to the skin and when it is combined with dominating Akash, a neutral complexion is produced. It is held that *Tejas* is also the principle of sight. If it fails to reach the region of the eyes of the embryo, the child will be born blind; if it reaches them penetrating through the blood, it favours the child with blood-shot eyes; blending with Pittam if it reaches them, it imparts yellow colour to the pupils and entering with *Kapham*, it makes the eyes white-coloured and when in combination with *Vayu* it reaches them, a defective eye-sight is presented to the child.

Causes of deformity in the foetus.

Ayurveda believes in the simultaneous development of all the limbs of the embryo. The shape and location of the different members of the body are naturally developed. Hairs are on some regions present while they are absent on some. It has already been mentioned that there are particular portions in the seed from which arise the particular limbs of the foetus. It is held that if in the seed as a whole or in any portion of the seed, the doshas, becoming excited, vitiate the seed wholly or in part, then those limbs which generate from the particular portion that has been vitiated, become subject to deformity in the child and under this theory is explained mothers begetting barren daughters and daughters, though not barren, who bring forth dead children and daughters who are of a breakdown of femininity under circumstances where that particular portion of the mother's element in the seed from which the child's Artava, organs of generations, and distinguishing organs of femininity grow, is vitiated respectively in the aforesaid three cases. Similarly mothers begetting sons who are incapable of begetting living children and who are without any masculine signs are also explained under this theory, as in the former case, due to the vitiation of the portion of the father's nuclei in the seed from which the child's sukra as well as the signs of mascular sex is generated. Along with the aforesaid conditions, the acts of the child that were done by it in its prior life determine the qualities and conditions of its organs.

The source of the qualities of the child.

The self who is enclothed within the physical body brings with it certain qualities merited by it in its previous existence, such as the knowledge of self, wisdom, duration of life, voice, complexion, pleasure, pain, desire, dislike, understanding, memory, will etc. The principles of sukra and artava, being only the transformed essences of the food and drink that a man and woman take, the nature of such food and drink also subscribes to the developing foetus's certain qualities, such as health, activity, cheerfulness, strength, complexion, growth, rotundity of the organism, wealth of voice, of blood, of semen and decadance of body. The qualities of courage, good health, strength, glow and memory are donated by the inborn conditions *i.e.* physiological conditions of the parents. The temperament of the child *viz. Prakriti, i.e.* the dosha which is naturally predominant in it from the time of its birth, is determined by the preponderance of a particular dosha or doshas at the time of the actual fusion of the two principles, sukra and artava. According as the vitiated doshas of the body are involved therein, either severally or in combination of two or of all, the different temperaments number seven as, Vataja, Pittaja, Kaphaja, Dwandaja (three kinds) and Sannipatika and their respective traits have also been described. Certain authors hold that temperaments of individuals have their origin in the material principles of the body and hence they classify them according to their qualities as *Vatika*, *Tejasa* and *Apya*, the nature of which agree respectively with the first three, mentioned above, with additional *Parthiva* and *Nabhasa*. The temperament of a man can never be abated nor altered, attempt at which should be considered as the harbinger of death. Space does not permit us to go deep into their depths and so we pass on by mentioning also the various kinds of mind possessed by the child. Verily are such minds three in number, *viz. Sattva*, *Rajas* and *Tamas*. Of these three kinds, innumerable are the points of difference in respect of their degrees, in respect of bodies *i.e.* with their age, etc.; in respect of the genealogical orders of soul to which the body belongs, *i.e.* either human or bovine etc. and in respect to the union of all these with one another. Of the innumerable varieties among the three kinds of mind, the Sattwika is of seven varieties as *Brahma, Mahendra, Varuna, Kubera, Gandharva, Yama* and *Rishi* and among the Rajasik, *Asura, Sarpa, Sakuna, Rakshasa, Paisacha* and *Preta* amounting to six, and among the Tamasika, three are the varieties, *viz Pasava* (beasts), *Matsya* and *Vanspati* which all indicate the nature of the mind after the manner of mind possessed by the aforesaid names.

The resemblance of the child is ascribed to the mother's thoughts dwelling upon an individual at the time of conception. The father's thoughts of such nature may also likewise influence and this explains the usual resemblance of an offspring either to its father or mother or with the features of both.

(*To be continued*).

GYNÆCOLOGY, OBSTETRICS, AND PEDIATRICS OF THE AYURVEDISTS

BY

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(*Continued from our December issue*)

Physiology :—

A right understanding of Ayurvedic Medicine depends on a correct conception of the Humours *Vayu*, *Pitta*, and *Kapha.* They are considered to be the physical and spiritual forces which regulate metabolism and reproduction. . Of these three, the Humour *Vayu* influences to a great extent the physiology and pathology of the various subjects comprised in Obstetrics and Gynæcology.

These forces act on food and help to build up the seven tissues—Root-Principles (*Dhatu*)—of the human organism.

The Humours are termed *Doshas* (Morbific Principles) when abnormally augmented or deranged. The microscopic and macroscopic products of the activity of the normal deranged Humours are termed the Excreta (*Mala*).

The Morbific Principles (*Doshas*) may permeate the whole organism without creating much discomfort, and it is only when they find a distinct lodgment in a part or tissue of the body that they become the exciting factors of Disease.

The Humours, the Root-Principles, and the Excretions (visible and invisible) are the foundations of the human body (Su.).

The Humours:—

The three Humours—*Vayu*, *Pitta*, and *Kapha*—are the primary and most essential factors of the human organism. They maintain its integrity; and if kept in a normal state of equilibrium, they ensure its vitality. They create, assimilate, and diffuse strength. These three Humours in combination with the fourth, the 'Principle of Blood' (*Rakta*), determine the origin, preservation and dissolution of the organism (Su.).

They occupy respectively the lower, middle, and upper parts of the body (Su.)

A deranged condition (*Dosha*) of any one of them may bring about the death of the organism; the deranged Humours give rise to diseases in the place of their incarceration and are the primary sources of all diseases; abnormal increase in the Humours is due to an increased use of substances that contribute to their formation; loss or deterioration in them is due to (1) repression of natural urgings of the body; (2) violent and over-fatiguing exercises; (3) amorous excesses; (4) unwholesome and unsuitable food; (5) grief, etc.; (6) excessive cleansing (catharsis, emesis, etc.); and (7) excessive pacifying measures (*Snehana*, etc.); the aggravation of bodily Humours is always accompanied by a disturbed and agitated condition of the 'Blood' (Su.).

Treatment of the Deranged Humours—A physician should increase or decrease the quantity of the body Humours in a sick patient according to the exigencies of a case until health is perfectly restored (Su.).

The question of medical treatment of deranged Humours arises on Six Occasions,

The deranged Humours accumulate in their locations and produce symptoms; the treatment should commence as soon as symptoms peculiar to their accumulation become evident; this is the *First Occasion*; if the Humours are checked in this stage, they fail to exhibit any further development; if left untreated, they gain in strength and intensity (Su.)

The aggravated condition of the Humours gives rise to pain and flatulence, acid eructations thirst, burning sensation, aversion to food, vomiting and nausea ; this is the *Second Occasion* of Treatment (Su.).

The deranged Humours, when aggravated, expand and overflow their respective localities ; sometimes singly, sometimes in combination of twos (*Sansarga*), or three together (*Sannipata*), or in unison with 'Blood' expand and overrun the organism in all directions ; the different types of combinations number 15 in all ; the deranged Humours not excessively aggravated, lie inoperative coating the internal passages of the body, and thus bring about a fresh disease ; this is the *Third Occasion* of Treatment (Su.)

Complete develoment of the characteristic symptoms is the *Fifth Occasion* of Treatment (Su.).

When a disease is neglected or not sufficiently cared for at the outset, it tends to become chronic or one of an incurable type ; this is the *Sixth Occasion* of Treatment (Su.).

1.—VAYU.

Vayu is the creator and the soul of the Universe, the cause of the various created forms, creator and supporter of progeny, all-pervading, the great annihilelator, Death itself (Va.). It is the life, strength, and support of all created beings (Ch.). It is a self-originated principle in the human organism, the Vital Force coursing through the body, and the divine energy of eternal life ; it is an independent, subtle and invisible force, absolute in action and effect ; it is the primary factor which establishes the principle of cause and effect in animate and inanimate objects, and is the chief factor which lies at the root of all diseases (Su.). *Vayu* is a force akin to electricity ; and is very quick in its results (Mahabharata).

Location.—*Vayu* is located in the regions of the pelvis and the rectum (Su.) It resides in the bones, intestines, waist, thighs, ear, and senses of touch (Va.)

Properties of Vayu are coldness, dryness, lightness, non-sliminess, and suppression ; it is extremely mobile and is the cause of expansion and overflowing of the Humours from their respective localities (Su.). It is cold, dry, light, clean, thin, rough and harsh ; it is the source of the sense of hearing and touch (Ch.). It is the principle of cohesion and action (*Rajas*) ; it is instantaneous in movement, and radiates through the organism in constant currents ; it is invisible ; it is mobile, piercing, and follows a transverse course (Su.). If it stays in the body in its proper place, retains its normal condition, moves about unhindered, that person will live for a hundred years (Ch.).

Functions.—*Vayu* (1) determines the growth, origin, and disintegration of all animated beings ; (2) though invisible, its works are manifest ; (3) it propels the deranged Humours in the organism ; in its normal condition, it maintains an equilibrium between the Humours and the Root-Principles (*Dhatu*) of the body ; (5) in its deranged state, it lies at the root of all diseases ; (6) it helps the sense organs to perform their specific functions ; (7) if obstructed, it may enter the the natural seat of *Pitta* and *Kapha*, and produce diseases peculiar to them (Su.).

Vayu fans the body fires (the energy of metabolism) residing in *Pitta*, dries the other Humours, and throws out secretions ; it gives form to the foetus, and may kill it ; or it may make the fœtus deformed ; it postpones delivery, and causes delirium (Ch.). It gives exhilaration ; it carrys on (1) respiration ; (2) actions of body, mind, and speech ; (3) eliminates urine, feces, and the Menstrual Fluid, etc. ; (4) regulates the functions of Root-Principles (*Dhatu*) ; (5) gives acuteness to sense organs, and (6) supports life ; it causes (7) dislocation of organs ; (8) fits ; (9) tearing, cutting, and piercing pains ; (10) loss of sense of touch ; (11) collapse ; (12) contraction of body parts ; (13) giddiness, horripilation, tremor, hollow feeling, throbbing, thirst, dryness ; (14) it causes bending and stiffening of muscles, or stops their action ; (15, it produces acrid taste, and a blackish or reddish colour (Va.).

Aggravation of *Vayu* is caused by (1) obstruction in its natural paths by the deranged or aggravated *Pitta, Kapha*, and *Rakta* (Blood-Principle) ; (2) the disorders of pregnancy ; (3) abortions or miscarriages ; (4) improper management of the puerperium (Ch) ; (5) violent gymnastic exercises ; (6) sexual excesses ; (7) excesssive study ; (8) headlong plunges into water ; (9) violent pressing blow ; (10) swimming ; (11) carrying heavy loads ; (12) excessive riding exercises ; (13) walking long distances ; (14) partaking of food which contains pungent, astringent, bitter, light or thirst-causing articles ; (15) diets of substances of cool potency ; (16) diets of *Vayu*—aggravating pot-herbs, *Phaseolus Mungo*, etc. ; (17) fasting, irregular meals, over eating ; (18) voluntary suppression of natural urgings of urine, 'Semen,' tears, eructation, etc. (Su.).

Derangements.—An *Excess of Vayu* causes the skin to become rough, loss of body-weight, dark complexion; tremors of the limbs, desire for hot things ; insomnia, hard feces, and diminished bodily strength; delirium, hallucination, and disgust of the world (Su., Va.).

The *Loss of Vayu* causes tired feeling, shortness of breath, uneasiness, and loss of consciousness (Su.)

The *Deranged Vayu* causes fullness of abdomen or of any of the viscera, inflammations, swellings, and œdemas (Su.). It may cause death of fœtus, abortion, prolongation of labour (in delivery); or loss of power of conception; it may make 'Semen Secretion' and 'Menstrual Flow' scanty, defective, or excessive; or it may stop them completely (Su., Ch.).

Five Sub-divisions of Vayu.—According to their functions and locations, the sub-divisions are :—(1) *Prana*, (2) *Udana* (3) *Samana*, (4) *Vyana*, (5) *Apana*; they contribute towards the integration and maintenance of the body.

Prana is the force that lies in the head, chest, throat, and nose, and passes the food down into the stomach; *Udana* is that which courses upwards and carries the sensations of the respective sense-organs; *Samana* courses in the stomach and intestines, and separates the excretions from the assimilated food; *Vyana* courses through the whole organism and imparts motion to the body; *Apana* courses in the lower portions of the intestines and retains or evacuates urine, 'Semen, feces, fœtus, and 'menstrual fluid.'

Of these, *Apana-Vayu*, therefore, is the most important from obstetric and gynæcological point of view (Su.).

Each of the above five *Vayus* obstructs or is obstructed by (1) the other four *Vayus*, 2) the other two Humours (*Pitta* and *Kapha*), (3) the seven Root-Principles (*Dhatu*), and (4) the excrements; each one gives rise to diseases and symptoms peculiar to each combination; the number of diseases is further increased by the number of different elective sites in the body (Ch.). A simultaneous excitement of the five vital *Vayus* brings on sure and speedy termination of life (Su.).

Treatment of Vayu Derangement.—The substances that pacify *Vayu* should possess the properties of oleagenousness, heaviness, heat, smoothness, softness, sliminess, and compactness (Ch.). The following are useful :—oleagenous medication (*Snehana*), diaphoresis and fomentations, laxatives, and oily enemas; anointing, massage, and warm clothing; frightening; sprinkle the body with decoction, infusion, etc.; comfort; give oils and ghee medicated with stomachic and appetising drugs; wines of treacles, or flour, etc.; sweet, sour, and saline foods (Va.).

Apana Vayu :—

Location.—Apana Vayu resides in the testes, the pubic region, male and female organs of generation, navel, thighs, groins, the rectum, and lower intestines (Ch.) ; it also resides in the hips (Va.).

Functions.—It bears down the fœtus , acts on the lower parts of the intestine, and throws out the feces ; evacuates urine ; ejects 'Semen' and makes the 'Menstrual Fluid' flow (Su.).

Derangements.—When aggravated, it brings on serious diseases peculiar to the bladder, rectum, and the generative organs ; when surcharged with *Pitta* it causes heat and burning sensation in the affected part and a profuse menorrhagia (Su.).

Treatment.—The central fact to remember in the treatment of *Apana Vayu* is to help it to seek its downward course out of the anus, vagina, and urethra (Ch.)

2.—PITTA.

Pitta is Internal Fire and has the quality of emiting heat ; it is a pungent sharp warm liquid of a blue or yellowish colour, has a fleshy smell, pungent taste, and becomes acid when deranged.

Location.—Pitta is located in the middle part of the body and in the region between the stomach and the pelvis (Su.). It resides in perspiration and 'Blood' (Va.).

Functions.—Pitta gives colour, digests food and controls metabolism, gives life to and nourishes the vital fluids of the body, is the cause of eye-sight, and preserves it ; it is thermogenetic and thermolabile, and originates Intellection (Su.).

Derangement.—Excess of *Pitta* causes sallow or yellow complexion, burning sensation, insomnia, craving for cold substances, loss of strength, weakness of sense organs, fainting fits and yellowness of conjunctiva, stools and urine. *Pitta* when deranged causes suppuration.

3.—KAPHA.

Kapha is cooling by nature ; it is sweet, slimy, and watery ; white, heavy and cool ; sweet when normal and saline when deranged (Su.).

Location.—Kapha is situated—in the upper part of the body—in the cavity of the stomach (Su.). *Kapha* resides in all other localities not occupied by *Vata* and *Pitta* (Va.)

Functions.—Kapha (1) lubricates the joints, (2) gives gloss to the skin, (3) forms healthy granulations in wounds, (4) gives rotundity to the body, (5) builds fresh tissues, (6) imparts soothing sensation to the body, (7) increases strength, (8) makes the limbs firm, and (9) supplies the watery element to the body (Su.).

Derangement.—Excess of *Kapha* causes whiteness, coldness and numbness of body, and heaviness of limbs ; drowsiness, languor, sleep, and a feeling of loose joints (Su). Deranged *Kapha* causes pus (Ch.).

The Root-Principles of the Body (*Dhatu*).

The Root-Principles of the body are seven :—Lymph, Blood, Flesh, Fat, Bones, Marrow and 'Semen.' (Va.).

The Diet of a human being consists of five fundamental Material Principles, (Earth, Water, Fire, Air, and Ether). It is divided into four classes :—(1) Drinks, (2) Edibles, (3) Lambatives, and (4) Foods (Su.). It has six tastes :—sweet, bitter, pungent, saline, acrid, and sour ; it possesses two attributes (thermogenic and thermolytic) and eight properties :—it is hot, cool, oleagenous, dry, expansive, slimy, mild, and sharp (Su.). The functions of these Root-Principles are,— to create desire to live, to support life, to fatten and strengthen, to carry on the metabolic processes and to procreate (Su.).

The food is fully digested with the aid of internal heat, is converted into Lymph (1) (*Rasa*), and finally assimilated into the system (Su.).

The Lymph (*Rasa*) is an extremely thin and attenuated fluid ; it is the essence of assimilated food ; it permeats the minute vessels, and is free from impurities *e.g.*, feces, urine, etc. ; it continually permeates and flows through every vital principle of an organism (Su.).

The Lymph pervades the whole organism ; its primary seat is in the heart, whence it flows through 24 vessels which branch off successively from the heart ; it thus reaches the remotest parts and extremities of the body ; the constant flow of Lymph soothes, maintains and irrigates the body ; it helps growth, and supports life ; it lubricates, vitalises, moistens, and nourishes the body, and has a 'cooling' potency (Su.).

The Lymph acquires a pigment in its passage through the spleen and the liver ; thus coloured through the effect of the internal fires of the body, it is now called (2) Blood (Su.).

Flesh (3) is formed from Blood ; Fat (4) is formed from Flesh ; from Fat.—Bones (5) ; from Bones originates Marrow (6) and from

Marrow, 'Semen' or 'Menstrual Fluid' (7); each of the above processes occupies five days; the conversion of Lymph into 'Semen' or 'Menstrual Fluid' requires one month; Lymph is thus successively transformed into each of the other six Root-Principles of the body and strengthens each of them. These seven (Lymph, Blood, Flesh, etc.) are called the Root-Principles (*Dhatu*) as they maintain the integrity of the human organism (Su.).

The approximate quantity of Water in the human body is 40 ounces. The Lymph (*Rasa*) formed from food is 36 ounces; the quantity of Blood is 32 ounces; that of Feces is 28 ounces; that of *Kapha*, 24 ounces that of *Pitta*, 20 ounces; that of Urine, 16 ounces; that of Marrow, 12 ounces; that of Fat, 8 ounces; that of Brain, 4 ounces; that of 'Semen' or 'Menstrual Fluid' is 2 ounces; that of Vital Principle (*Ojas*) is 2 ounces (Ch.). 'Menstrual Fluid' is 16 ounces ard 'Semen' 2 ounces (Da.).

The body contains 8 ounces of *Majja*, 16 ounces of 'Fat', 24 ounces of Marrow, 32 ounces of Urine, 40 of *Pitta*, 48 of *Kapha*, 56 of Excrement, 64 of Lymph and 72 ounces of Water; there are also 8 ounces of each of the following:—the Vital Principle (*Ojas*), Brain, and 'Semen'; there are 16 ounces of milk and 32 ounces of 'Menstrual Fluid'; these are the quantities in persons whose system is in equilibrium; they vary with changes in the Root-Principles (Va.).

'Blood' increases the healthful glow of the complexion; 'Flesh' makes limbs stout; 'Fat' makes the body glossy; and the 'Bones' make the body firm and support it; 'Marrow' fills bone cavities, and is the chief source of strength, amorous feelings, and joy (Su.).

'Semen' (*Shukra*) increases strength, amativeness, valour, and courageousness; it is the sole impregnating principle in the male organism and possesses the quality of being quickly emitted; it is endowed with cooling property (*Soma*); it lies in a potential state in a male child and appears with the growth of the beard and moustache (Su.).

'Menstrual Fluid' (*Raja* or *Artava*)—a higher derivative of Lymph and Blood—has a cooling potency and is also thermogenetic in character; it lies in a potential state in a female child and appears with the growth of the pubic hair, the uterus and the vaginal canal, and the enlargement of the breasts. It commences at the age of 12 and ceases to flow at the age of 50 years (Su.).

The strength or weakness of the seven Root-Principles (*Dhatu*) depends on the richness or poverty of Blood (Su.). Loss or deterioration in the Root-Principles (*Dhatu*), the Humours, and Visible and Invisible Excrements (*Mala*), is due to (1) repression of natural urgings of the body, (2) violent or over-fatiguing exercises, (3) amorous excesses, (4) unwholesome and unsuitable food, (5) grief etc., (6) excessive cleansing (Catharsis, Emesis, etc.), and (7) excessive pacifying measures (*Snehana*, etc.) ; an abnormal increase in the above three is due to increased use of food substances that contribute to their formation (Su.).

Breast milk is a higher derivative of Lymph (*Rasa*) (Sha.).

Blood is the origin of the body, and is life itself ; it is vivid red in clour, and is neither too thin nor too transparent ; it increases healthful glow of skin, maintains vitality, and forms muscles ; its seats is in the liver and the spleen ; it is red, warm, oily, sweet, heavy, and has a fleshy smell ; the aggravated condition of the blood is always accompanied by aggravation of the bodily Humours ; and is due to indulgence in heat-generating, pungent, acid, or alkaline foods and pot-herbs ; and exposure to heat ; if over-stimulated, 'Blood' gets deranged and obstructs *Vayu* in its path (Su.).

Loss of 'Blood' causes roughness of skin, craving for acid foods, and cold substances ; excess of 'Blood' imparts fullness to the veins, and gives a reddish glow to the complexion (Su.).

The functions of the Root-Principles are,—to create the desire to live, to support life, to fatten and strengthen, to carry on the metabolic processes, and to procreate (Su.).

The Visible and Invisible Excrements.

The Excrements are of seven kinds. The Excrement of 'Lymph' is Mucous ; of 'Blood' Bile ; of 'Flesh'—Discharges of the Nose, Ear, Eyes, etc. ; of 'Fat'—Perspiration ; of Bones'—Nails and Hair ; of 'Marrow'—the oleagenous portions in Eyes, Skin, etc. ; of 'Semen' and 'Menstrual Fluid'—*Oja* or Vital Energy (Va.).

Fæces and flatus are the waste products of digestion ; the urine fills the bladder (Su.).

Function.—The excreta are absolutely necessary for the preservation of the body ; the urine washes off the waste matter of the system ; perspiration moistens the skin (Su.).

Derangements.—Loss, absence, suppression or scanty formation of Fecal matter, cause pain in the heart area, cause upward coursing of the flatus, and rumbling sound in the region of liver and intestines ; in the case of diminution of urine, there is pain in the bladder, dribbling of urine, and scanty discharge ; similarly, in the case of diminution of Perspiration, there is numbness and dryness of the skin ; Perspiration is stopped and sense of touch is affected (Su.).

Excess of Fæces causes colicky pains in the loins and the intestines ; excess of Urine causes gnawing pain, distension of bladder and frequent micturation ; excess of Perspiration causes itching of the skin and bad odour (Su.).

Treatment.—The abnormal excesses of the aforesaid Humours, Root-Principles, and Excrements should be remedied with cleansing and pacifying measures, according to their respective nature, so as not to reduce them to less than their normal and healthy state in the body.

Pharmacology :—

Ayurvedic Therapy is based on the Humoral Theory of Disease. Sushruta believes that Potency alone of a drug has the curative properties ; a drug is of primary interest to the Ayurvedist only because potency cannot exist independently of a drug.

Treatment is based on the administration of drugs with properties similar in character to (1) the exciting factors of a disease or the symptoms of a disease, or similar in character to both the exciting factors and symptoms of a disease ; and (2) drugs with properties contrary in character to the exciting factors, the symptoms, or to both.

Treatments are further grouped under two heads :—(1) cleansing of the body from the morbific principle (*Doshas*) with purgatives, emetics, etc. ; or (2) restoring the deranged Humours (*Vayu*, *Pitta* and *Kapha*) to their normal conditions, without resort to any eliminating processes.

Diet.—A good and proper diet in disease is considered worth a hundred medicines, and a strict regimen of diet is insisted on.

Pharmacopoeia :—

The medicinal plants are classified in Ayurveda according to affinities of their therapeutical properties. The drugs belonging to the following Groups are much used in Gynæcology, Obstertrics, and Pediatrics in addition to those mentioned separately in the text :—

(1) *The Desmodium gangeticum Group* :—The drugs subdue

the action of deranged *Vayu* and *Pitta*, and are useful in phthisis, tumours, etc.

(2) *The Cassia Fistula Group* :—These drugs are useful in deranged *Kapha*, urinary discharges, leucoderma, fever and ulcers.

(3) *The Dichrostachys cinerea Group* :—These drugs are useful in deranged *Vayu*, and all urinary troubles and concretions.

(4) *The Cratæva religiosa* :—These drugs are useful in deranged *Kapha*, tumours, internal abscesses, headaches, etc.

(5) *The Symplocos racemosa Group* :—These drugs are useful in deranged *Kapha* and 'Fat,' in vaginal and uterine disorders, in ulcers, in arresting secretions and excretions of the body.

(6) *The Ocimum sanctum Group* :—These drugs are useful in deranged *Kapha*, asthma, bronchitis, etc. ; and as anthelmintics.

(7) *The Piper longum Group* :—These drugs are useful in derangement of *Kapha* and *Vayu*, in abdominal enlargements, colic, and as an appetiser.

(8) *The Elettaria Cardamomum Group* :—These drugs control the action of *Vayu* and *Kapha*, and are useful in skin diseases, etc.

(9) *The Acorus Calamus Group*, and (10) *The Curcuma longa Group* :—These drugs purify breast-milk and assimilate the deranged Humours.

(11) *The Trichosanthes cucumerina Group* :—These drugs are useful in deranged *Kapha* and *Pitta*, in vomiting, ulcers, erythematous eruptions and as a febrifuge.

(12) *The 'Kakoli' Group* :—These drugs are useful in deranged *Pitta*, 'Blood,' and *Vayu* ; they are galactogogues, restoratives and elixirs.

(13) *The Ushaka* (alkaline earth) *Group* :—These drugs of the mineral kingdom are useful in derangement of *Kapha*, in dysuria, tumours, and urinary calculi.

(14) *The Hemidesmus indicus Group* :—These drugs are useful in hæmoptysis, thirst, bilious fevers, etc.

(15) *The Ficus bengalensis Group* :—These drugs are useful in all disorders of the uterus and the vagina, in fractures, in all secretions of the body and in ulcers.

(16) *The Nymphœa lotus Group* :—These drugs are useful in derangement of *Pitta* and 'Blood' ; also in thirst, vomiting, heart disease, hæmoptysis, etc.

(17) *The Cyperus rotundus Group* :—These drugs are useful in uterine and vaginal disorders ; they purify disordered breast-milk and act as good appetisers.

(18) *The Small Group of 'Five Roots'* :—These drugs are astringent, bitter, and sweet in taste ; they are useful as tonics and aphrodisiacs, and subdue deranged *Vayu* and *Pitta.*

(19) *The Large Group of 'Five Roots'* :—These drugs are bitter in taste and are useful in deranged *Kapha* and *Pitta* ; they are good appetisers. The two groups together are useful in all types of fevers.

(20) *The Group of 'Five Grasses'* :—These drugs are useful in hæmoptysis and urinary complaints.

(*To be continued.*)

Health and Hygiene

DRESSING THE INFANT.

The welfare of your child depends primarily upon its hygienic surroundings, proper nourishment, and suitable, comfortable clothing. Infants who are too warmly dressed are usually unhappy ; they fuss and fret—suffer from prickly heat and are most susceptible to colds and other diseases.

Too little clothing also is dangerous—fresh air fiends to the contrary notwithstanding.

Correct clothing and its care are highly essential to the health of all babies and children. This treatise may throw some light on some things you may not khow.

In this connection Dr. Elizabeth MacIntyre says in Nature's Path that infants and babies may, like their elders, be too well-dressed, rather than suitably and comfortably clothed. Many a mother, fearful lest her cherished possession may "take cold" will weigh down its soft tender body with article after article of wearing apparel to keep the little one warm. Many an old-fashioned mother overlooks the fact that steam heat has replaced the open-fireplace, and will swathe her infant in layers of flannel and an abundance of outer clothes. Both these mothers seem non-plussed when "little precious" begins to sniffle, appears sickly, listless and becomes susceptible to every disease on the calendar.

Too much clothing keeps out fresh air and sunshine and keeps in too much perspiration and body-heat, thereby causing an infant to suffer from general discomfort. Too loose clothing is annoying to a child while too tight clothing is apt to hinder circulation, restrict the movements of the child and result in the little hands and feet being cold.

To my mind the most important item of comfort to the infant is the diaper The most popular material for this indispensible article is cotton bird's-eye although some mothers prefer to use old, soft linen as it is less irritating to the baby's skin. At least four dozen should be in constant use and be replaced as they wear out.

When a diaper becomes wet, it should be changed at once for a fresh one from the laundry. Never should they be allowed to dry and be reused without proper washing. When diapers are soiled, they should be removed and taken at once to the bathroom where the solids should be scraped off and then they should be placed in a covered receptacle until there is time to thoroughly launder them.

All diapers should be washed in very hot water with a pure white, mild soap and then boiled for twenty minutes. Rinse them until every vestige of soap has been removed and dry in the open air and sunshine. Diapers should be ironed as they are thereby rendered softer and less irritating to the baby's skin.

Serious illness and infections often result when care is not used in laundering this article of clothing.

Waterproof diapers or rubber pants are not healthful and should not be put on a baby unless absolutely necessary.

For skin irritation on an infant's buttocks or thinghs, the best remedy is to expose the affected parts to the sunlight and leave off the diaper. If this is impossible, apply a pure oil to the irritated part. This will stain the diaper but after all, it is baby's health and comfort with which we are concerned.

Every child should be trained to use a chamber from the time is is three months old. In this way mothers will be saved much laundry and it will be a valuable habit to the child—a first battle won in its life-long war on constipation.

Travelling with a baby is difficult at best. Many mothers will absolutely refuse to do it and this judgment is to be commended as the change of atmosphere, food and water is not good for any infant. But there are times when travelling is absolutely necessary and here the problem of laundering and sanitation becomes quite difficult. It can be solved, however, by dipping each wet diaper into a boric acid solution and drying before use. Pads of sterile gauze can be used inside the diapers for receiving the solids and can immediately be thrown away. As soon as possible, launder these diapers thoroughly.

Other articles of clothing are necessary, of course, but I would suggest that when your child is completely dressed, the entire equipment should consist of a band, shirt, diaper, skirt, dress and bootees. It is far better to dress an infant lightly and slip on a jacket should the weather be cool in mornings and evenings. A baby's clothes should not be fancy—there should be no lace about the necks of the dresses as this may cause irritation. In laundering, no article of infant's clothing should ever be starched.

Too little clothing also is dangerous to baby's health but it has been my experience to note that more babies ‘take cold” and become sickly babies through too much clothing than from a lack of it.

PREVENTIVE DENTISTRY AND NATUROPATHY.

Dr. Joseph Wolfman writes in Nature's Path that in prehistoric times when our ancestors lived in the open and subsisted on raw natural food-stuffs which contained all the necessary vitamines, we found a healthier and stronger race than the present one which is afflicted with the modern diseases and ailments that are the results of adulterants, preservatives and improper cookery. The skulls of these prehistoric men reveal good strong healthy teeth. The reasons are :

1st. The bony structure of living creatures consists of lime salts. This must be found in our diet in sufficient quantity in order to supply the body with the necessary amount to build our bones and teeth.

During intro-uterine life, the lime salts are supplied from the expectant mother's diet. If the diet lacks the necessary amount of mineral salts, nature removes these from the bones and teeth of the mothers—therby weakening the mother's teeth during this period and making them more susceptible to decay.

Just as Nature can remove these calcium salts from the teeth, so can Nature replace them if we supply our body with sufficient lime salts in our diet.

2nd. The prehistoric man ate raw food which required mastication. The friction caused by chewing this hard food stuff not only gave the teeth their proper exercise but helped to keep them clean automatically. That is the reason why the teeth of our ancestors did not require any modern dentifrice and a tooth brush.

Moreover the modern pastry and starchy food-stuffs were unheard of in prehistoric times. These food-stuffs are the cause of our modern dental ills and the downfall of our teeth.

These food-stuffs require little or no mastication, hence the teeth forego their necessary exercise. Proper and hard use of the teeth not only preserves them but lengthens their life. Lack of use destroys them.

3rd. The prehistoric man knew nothing of the modern methods of saving teeth. When a tooth annoyed him, he had a crude way of removing the offending member and unknowingly he saved the internal organs from being poisoned by an infected tooth.

The haphazard and careless way of saving teeth by modern dentistry as practised to-day has been the cause of all the ills and ails of the body.

Decomposed food that is found in cavities of the teeth or spaces between the teeth, putrescent matter that is found under fixed bridge work, pus that oozes out of infected pyanhetic gums and abscessed teeth and myriads of germs that are found present in all these conditions are either mixed with the good clean wholesome food during mastication and swallowed or is directly absorbed by the blood that carries the life-sustaining elements to the cells of the body, causing, in due time, innumerable internal organic diseases such as neuritis, nephritis, arthritis, anemia, ulcers of the stomach and many others.

You do not have to be a professional man or scientist to grasp the truth of the foregoing statement. You know that as soon as you cut your finger, the first thought that enters your mind is blood poison. Why? Because infection cannot enter the body unless there is an open channel or wound.

There are three natural open channels through which infection could enter the body and infect the internal organs—the nose, genito-urinary tract and the mouth.

The mouth is a varitable metropolis of germs—if proper care and supervision are neglected. There are over 100 possible points of infection in the mouth, any one of which may be the cause of ill-health.

Why waste our good money and efforts to procure and prepare tasty, wholesome food when the minute we take it into the mouth it becomes polluted?

In preparing our diet, we must not only make sure that our pots and pans are clean, but that the rest of our utensils, the teeth and bridge-work, are sanitary as well.

Preventive dentistry helps you not only to preserve your teeth and gums in a clean healthy condition but it preserves your health. It gives you an opportunity to derive 100 per cent benefit from your properly selected diet.

Do not go to the dentist only when you are in pain. Get the habit of going to him when you think your teeth are still good and let him examine them properly and clean them thoroughly.

Cavities do not form over night. It takes months and even years of destruction before you may be aware of any trouble with your teeth. Just remember that an ounce of prevention is worth a pound of cure—do not neglect your teeth and gums.

a. Make sure your diet contains sufficient mineral salts that are so essential to the development and maintenance of good sound healthy teeth.

b. Get the habit of chewing your food on both sides of your mouth. Shift the mass of food from one side to the other during mastication. Be sure your diet contains at least one substance that will help the teeth to clean themselves automatically. As an example : an apple after each meal will accomplish this.

c. Keep your teeth clean. Have removed all infected teeth or insanitary bridges. Go to your dentist three or four times a year and let him examine your teeth and clean them properly. Do not wait until you are driven to him by pain or discomfort. Have fillings inserted in your teeth as soon as the least indication of decay is apparent. The smaller the fillings, the better it is for the tooth.

By such watchfulness, large unsightly fillings, nerve experpation (removal) and extraction of teeth will be done away with in course of time.

Bridgework and plate work will be relegated to the museums for future generations to see and to gasp at the stupidity of their ancestors who were so ignorant of the knowledge of preservation of their teeth—nature's priceless gift.

Medical News & Notes

FOSTERING THE PHARMACEUTICAL INDUSTRY.

In order to promote the home manufacture of drugs and pharmaceuticals, the Government of Japan has appointed a commission of enquiry to investigate the whole position. The chairman of the commission is the minister for home affairs and among the members are officials of the department of health, medical teachers, technical chemists and pharmacists. A preliminary investigation carried out at the hospital attached to the Nagoya Medical University shows that the native preparations compare favourably with imported articles both as regards quality and price. The annual value of drugs and pharmaceuticals now imported into Japan is estimated at over 20,000,000 yen.

MALARIA IN SIAM.

A report in the Quarterly Bulletin of the League of Nations Health Organisation states that the anopheline and malaria survey was carried out in the following eastern provinces of southern Siam : Singora, Patalung and Nakon Sritamarat, from April 9th to 27th, 1931. Two regions, distinct in their physical features, may be recognised—the eastern coastal and the hilly inland zone—and, in consequence, two main problems are to be faced : sea-coast malaria and inland malaria. The latter occurs in the plains and in the hilly land. When malaria occurs in the outer parts of the coastal zone in association with *A. ludlowi*, its incidence is, generally speaking, moderate This is probably due to the limited chances for the breeding of *A. ludlowi* owing to the influence of the daily tides. The deeper regions of the coastal plain—the cultivated areas irrigated by streams—may be malarious, malaria there being associated chiefly with *A. aconitus* and rarely with *A. culicifacies*. In the central hilly region, especially on the foothills, malaria attains, as in the north, a severe hyperendemic form, in association with the stream breeding of *A. listoni* and *A. minimus*. A total number of 3,091 children was examined for spleen rate, and, in 375 cases, the spleen was found enlarged. The average spleen rate was 12 per cent. The highest index, 86 per cent., was observed on the foothills. Generally speaking, in the south, the incidence of malaria is much lower than in the north. As regards medical attendance and quinine treatment, the rural districts are in conditions similar to those of the north.

A strict connection exists between the habits of malaria-carrying anophelines and the requirements of agriculture in the northern, and in some of the southern parts of Siam. The poverty of the northern rural population and the lack of medical attendance have raised malaria to the rank of a serious social problem, and its control and prevention deserve a special effort.

TRIBUTE TO PHARMACY.

The "pharmacy," ordinarily called a drug store, is an institution of prime importance to national and individual welfare, states the *Detroit Times*. In that institution man has made himself master of the science of pharmacy, which is the science of supplying drugs, that is to say, chemical substances, apart from foods, for the cure and prevention of disease. The pharmacist is the scientific distributing agent in the battle of mankind against its enemies, from disease-breeding microscopic bacteria up to the dangerous higher forms of life.

Ancient magicians pretended to practise the science of pharmacy, of which they were necessarily ignorant. "Doctors" in the primitive days of superstition, with their love philtres and much nonsense about grinding up pearls and other precious stones, loathsome insects and reptiles for curative purposes, ruled the world of medicine for centuries.

During the past century, and even more amazingly in this twentieth century, the science of the pharmacist has made termendous strides. One hundred years ago, a few inorganic salts and vegetable extracts of doubtful value constituted the whole stock in trade even of the comparatively "scientific pharmacist" of that date.

Within the last 30 years the science of pharmacy, represented on the shelves of thousands of drug stores to-day, has made extraordinary progress, immensely valuable and important to the race as a whole, and to every family and every individual in every country.

Curiously enough, crude experiments and guesses of ancient pharmacists, and old school doctors of 50 and 75 years ago are now part of the highest form of the science of pharmacy. Extracts of endocrine and other glands that control bodily functions are used to-day as a matter of course. The suggestion that they be used, offered by Dr. Braun-Seguard in the last century, was ridiculed. The German scientist, Ehrlich, starting with the knowledge that organic arsenic compounds destroyed certain organisms, discovered and applied his remedy, Salvarsan, commonly called "606," and successfully used now in one of the worst blood diseases, as quinine has been ever since its discovery, in the fight against malaria.

An educated man, with the lights of different colours in his store windows, to indicate his scientific profession, the corner store druggist is a public servant of highest value. Before he can receive his degree as a pharmacist he must go through years of hard study. He must be familiar with the thousands of drugs, remedies of all kinds with which his shelves are filled. He must read correctly, and prepare with minute exactness, to the fraction of a grain, the prescriptions that the doctor entrusts to him, and that are often hurriedly scrawled in the sick room. It used to be the fashion, in England, to make prescriptions as illegible as possible.

That which is important and calls for public recognition and gratitude, is the work done through long hours by the trained man "at the back of the store," on whose accuracy may depend the life as well as the health of his neighbours.

THE USE AND ABUSES OF MASSAGE.

In the course of an address to the Medical Society of London on "The Use and Abuse of Massage," Dr. A. H. Douthwaite said that he used the word "massage" to include physical exercise and declared that he knew of no condition likely to benefit from massage alone, with the possible exception of insomnia. He confined himself to the discussion on certain common diseases or symptoms which illustrated the benefit derived from this treatment. Pain resulting from injuries such as fracture and sprain might be relieved by the judicious use of massage. One had only to look back upon the prewar treatment of sprain to realise what an enormous advance massage had made in this direction. Formerly it was usual for a sprained ankle to incapacitate the patient for five or six weeks and not to become normally strong again for six months; nowadays, owing to the employment of massage, these periods had been reduced to four days and three weeks respectively. The massage of an inflamed area in general was contraindicated. On the other hand, acute and chronic fibrositis responded better to this condition than any other treatment he knew. Oedema could be at least ameliorated by massage, if not cured. With regard to constipation, purgatives and even so-called lubricants were not entirely harmless, yet how few patients in the place of these remedies had been subjected to massage and remedial exercises with a suitable dietetic regime. First and foremost, abdominal breathing had to be taught in order to obtain voluntary and active contractions of the diaphragm.

In localised wasting of muscle groups, the more general atrophy of rheumatoid arthritis, or any chronic disease which involved long rests in bed, muscle kneading prepared the way for graduated exercises. As to cardiac disease, in congested heart failure, when the acute symptoms had subsided, massage was a useful adjunct in aiding the venous return to the heart. Of much greater importance was it to apply remedial exercises prior to allowing the convalescent heart patient out of bed. Another function of massage was to prevent post-operative embolism. The slowing of the circulation consequent on post-operative immobility must be an important factor in determining the incidence of embolism, and if, combined with muscular kneading, the miserably shallow post-operative respiratory movements were encouraged to greater excursion, the venous return must benefit, and with it the incidence of post-operative embolism would fall appreciably. Finally, he dealt with the value of remedial exercises in asthma. Asthmatic breathing was very largely a muscular effort ; the inspiration of the asthmatic started where normal inspiration finished. By restoring the chest to its normal position one might carefully preserve a three to four inch expansion in a chronic asthmatic for many years. The main abuses of a massage were : the giving of massage to an inflamed area ; persistence with massage as opposed to exercises ; failure carefully to graduate the exercises—especially in heart disease ; and, finally, unduly early treatment by massage in poliomyelitis.

I. C. I. CHAIRMAN'S VISIT TO INDIA.

Sir Harry McGowan, Chairman of Imperial Chemical Industries, left London on December 22nd for a brief visit to India and Ceylon. The main object of his journey is to confer with the representatives of the company in the Far East. He expects to return to London at the beginning of March, but on the way home will probably spend a week or two in Egypt in order to discuss the company's affairs in that country.

THE JOURNAL OF AYURVEDA

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LATE KAVIRAJ SATYA CHARAN SEN

It is with the deepest regret and profound sorrow that we have to announce the death of Kaviraj Satya Charan Sen, which melancholy event took place on the 7th Pous i. e. 22nd December, 1932 last. He breathed his last by the side of the Ganges, at the age of 57.

Kaviraj Satya Charan Sen was not only an eminent physician of Calcutta, but also a well-known journalist and a good Sanskrit Scholar. He was a religious man and an ardent disciple of Pagal Haranath Thakur. He had been an examiner of the Calcutta University for a very long time and wrote several text books. Besides these, he was the author of some important books on Ayurveda, such as "Kaya-Chikitsa", "Bhaisajya-Vijnana", "Baisajya-Manimalika", etc. But the most important and valuable work of his life was in connection with the spread of Ayurvedic knowledge through popular journals. When the late Kaviraj Jamini Bhusan Ray started the Astanga Ayurveda College, Kaviraj Satyacharan became its first Superintendent and later on became the editor of the Bengali monthly "Ayurveda". After the death of Jamini Kaviraj, Kaviraj Satyacharan took over charge of the Vaidya Shastra Pith (then newly established by Kaviraj-Siromoni Syamadas Vachaspati) as its Superintendent and Professor. This position he held until the time of his death. The year before last, he started an excellent journal on Ayurveda — The Ayurvijnan-Sammilani—practically the only Ayurvedic paper in Bengali at the present time. By his death, we have lost a strenuous worker in the field of Ayurveda, a loss that we can ill afford to spare at this critical period.

He leaves behind him his widow, two sons and four daughters. Our heart felt sympathy goes to his eldest son, Kaviraj Indu Bhusan Sen and his family.

"A DREAM"

(AJIT KRISHNA BASU)

Once I saw in a dream :—
While passing by a stream
I shaw two men coming side by side ;
One continued smiling, and the other sighed.
One was strong-built, his health I admired.
But Oh ! he looked so gloomy and infinitely tired !
"I am getting wose every moment" slowly he uttered.
And grew worse and worse as these words he muttered.
But the other man, though his health was not so good,
Complained not like that, but smiled in a jolly mood.
He said "Every moment I am getting better and better."
And he grew better with the utterance of every letter !
I suddenly awoke, and thought,
"This dream has a meaning, has it not ?
Perhaps this the meaning comes to, summing,—
You really become what you think you are becoming.

Think you are getting better,
And betterness you will own,
But if you think you are getting worse
The thought will drag you down.

(Health & Hygiene)

Original Articles

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TREATMENT OF INFLUENZA in AYURVEDA WITH BITTERS.

By

KAVIRAJ A. C. KAVIRATNA,

Calcutta.

Swarup Singh, aged 30 years, by caste Brahmin, an inhabitant of Muzaffarpur, recently came down to Calcutta on business. He was attacked with fever attended by a severe pain all over the body, intense. head-ache, running of nose, restlessness and constipation. He was at the onset of the attack treated in a local Allopathic Dispensary for about four days with Salicylate mixture and Seidlitz powder but there was no marked improvement The patient then consulted a Kaviraj of the locality, who, it was understood, tried Mrityunjoy Rasa in ginger juice for a couple of days but to no purpose. On the 7th day of the disease I was called in to examine the patient. On examination I learned from the patient that his head-ache and pain on body were gradually intensified and the temperature did not come down to normal. Temperature used to vary between 101°F and 103°F. His tongue was coated with deep yellow tint, there was nausia. Pulse was quick and feeble, intense thirst for water and great restlessness and the patient looked very much exhausted. There was no abnormality in the chest. Abdomen was hard and painful to the touch, skin was dry. Kapha and Pitta were greatly deranged. I prescribed him the following medicine with admirable success :—

R/ Amiya Batika ... 2 pills.

With four oz. of water administered in the morning. This moved the bowels twice freely and the patient felt a bit restful. He was kept on Sago water and no more medicine was given to him on the day.

On the 2nd day of my treatment, the temperature in the morning came down to 99°F. and I was again sent for. On examination, I found the patient almost in the previous state except that the temperature was lower. I then prescribed the following medicines :—

R/	Panchatiktasar	...	Gr. X.
	With milk in the morning.		
(b)	Naradiya Lakshmibilash	...	2 pills.
	Makaradhwaja	...	Gr. II.

Mixed together and divided into 4 doses—Twice daily every six hours with honey and betel leaf juice.

On the following day, i. e. on the 3rd day of my treatment, the temperature was subnormal, patient had good sleep in the previous night followed by copious perspiration, felt hungry and had healthy motion. Tongue cleared up. I repeated the above medicines and kept the patient on liquid diet and on the 5th day he was declared cured and rice as diet was allowed.

Amiya Batika and Panchatiktasar are my patent preparations.

The ingredients of the preparations are however given below for the guidance of brother practitioners :—

Amiya Batika consists of Musabbar (Aloes), Saindhab (Rock salt), Jangiharitaki (Small Myrobalan), Mouri (Aniseed), Hirakas (Ferri Sulph), Teuri Root (Pithori). It is laxative and bowel and liver regulator.

Panchatikatasar contains reduced iron, Ferri Sulph, Ginger, Gulonch (Sat Gila), Chirata, Neem (Margo) bark, Ataich (Atis) and Creat.

This is tonic and febrifuge of supreme efficacy with pain in body and weakness.

The preparation of Naradiya Lakshmibilash and Makaradwaj are well known and hardly needs introduction.

I would advise my brother practitioners to try the above prescription in their practice and report the result in the journal.

CIRCULATION

THE BASIS OF PHYSICAL AND ECONOMICAL HEALTH

BY

DR. HUGO R. FACK.

NATUROPATHY has, by its study of human disorders down through the ages, come to definitely recognize that the cause of ill-health or disease is due primarily to a disturbance of the blood circulation. It has established further the fact that these disturbances are produced by an impure condition of the blood caused by unnatural living and eating habits.

That the perfect circulation of pure blood is the basic principle underlying all health building is taught by anatomy and physiology as well as by every pathological condition.

The heart is the central station of our circulatory system. Its strong muscles produce a powerful suction and pressure for distributing the blood all over the body. The heart's failure to function means stoppage of the circulation—death.

The walls of the arteries are provided with muscles to assure the even flow of the blood and to support the heart in the distribution of the blood to every cell of the system.

It is only by means of the circulation that the cells, the basic units of our system, receive their nutritive materials from the blood while, at the same time, they give off to the circulating blood the used up material for elimination through the proper channels. Thus, on the incessant circulation of the blood rests the vital process of the change of matter, of metabolism. Any disturbance in the circulation will disturb this exchange, will deplete the cell, will mean health disturbance with disintegration, decomposition and eventual death.

The depletion of one area of the system of circulating blood necessarily leads to a congestion of blood in another area. In such congestions the constructive elements are soon consumed and a state of unhealth or disease is produced.

The veins, which return the impure blood to the heart, are equipped with devices preventing its backflow and maintaining its constant forward circulation. On this condition only, the health building exchange of used up material for nutritive substances is assured.

Thus we see that on the principle of circulation is based the health of our whole system, of every single part or cell. Circulation means health. The failure of circulation results in disease and ultimately, in death.

MEDICINES, drugs, serums, vaccines etc. do not purify the blood nor vitally stimulate its circulation. On the contrary, they add to the very cause of disease by injecting foreign matter into the blood stream and thus violate the very principle of health.

Naturopathy, not treating symptom but causes of diseases, considers, therefore, in its therapeutical measures only those principles leading to the removal of the disturbances of circulation, to the purification of the blood, and the regulation of its perfect circulation.

ALL natural therapeutic principles, be they of purely hygienic nature, such as the use of sunshine and air, exercise and est, warm and cool applications, food and creative thought, or be they of an artificial character, such as radiations, electric therapy, etc. always have the basic goal of purifying the blood by neutralizing and eliminating toxic waste, of removing congestions and thus aiding normal blood circulation.

The perfect circulation of pure blood is the fundamental condition of health, and all remedial measures have to serve this supreme principle of health and life.

In our economic system of social life there exists a blood, on the perfect circulation of which our economic health depends. And just as a disturbance of the circulation of our blood leads to disease, so a slowing down or disturbance of the circulation of our economic blood invariably results in economic disease.

This economic blood is money, which is the medium of exchange in the economic system. As the blood performs the exchange of nutritive and used up matter in the cell system, so money performs by its circulation from hand to hand the exchange of products and services on which our economic health depends.

As long as the circulation of money is maintained, the exchange of goods and services is assured and economic health is constantly increasing for all who participate in this exchange with their products or services, Nature has provided us with abundant raw materials. Man has infinite wants. He is only too anxious to work to relieve himself and the world in general of a chronic economic diseased condition—poverty. He wants an uninterrupted exchange of his products and services by means of the circulating economic blood—money. He desires a perfect economic health, an ever increasing enrichment, a prosperity and wealth for all who work.

As it is, an ever increasing economic disease is with us. Poverty has almost become general because of the exchange of our products and services being largely interrupted. Consequently, production has practically come to a standstill, because the exchange of the existing stock has come almost to a stagnation.

(*Nature's Path*).

A NATIONAL DRINK OF THE HILL-FOLK OF DARJEELING.

By Nishi Kanta Ray, B. A.

Bacteriologist, Vaccine Laboratory, Bengal Public Health Department.

The hillmen of Darjeeling freely indulge in a mildly-intoxicating drink called *chhang,* brewed from *marua* millet (*Eleusine coracana*). This is the national drink of the people, and they are permitted to prepare it up to a certain limit without the payment of any fee. Sir George Watts, in his *Dictionary of the Economic Products of India*, gives the composition of *marua* grain (husked) as follows :—

	Per cent;
Water	13.2
Starch	73.2
Fibre	2.5
Albuminoids	7.3
Oil	1.5
Ash	2.3

In the manufacture of the alcoholic liquor the starchy portion is first converted into sugars which are next fermented. These changes are brought about by the activity of various moulds and yeasts, and a culture of these organisms is supplied in the form of *murcha* prepared from several ingredients. C. M. Hutchison and C. S. Ram Ayyar describe the manufacture of *murcha* in the following manner :

"In Darjeeling the outer skin of the root of certain wild plants (that used by the Nepalis is known to them as *bhimsenpati* and was identified by the Curator of the Lloyd Botanic Garden as *Buddleia asiatica* Lour., whilst the Limboo tribes use *wading hang-ma* (*Polygala arillata* Ham.) is dried and powdered ; four ounces of this material, half an ounce of ginger, three pieces of red pepper (chillies), and eight pounds of ground rice are kneaded into a stiff paste with water, made up into small round cakes about half an inch thick and dusted over with powdered cake from a previous batch. The cakes thus prepared are wrapped in fern leaves, placed on a mat in a dark corner of the house, and left undisturbed for three days, when they are taken out and dried, preferably in the sun, and are subsequently kept dry by hanging in a cloth above the fireplace." These authors ascribe the saccharification of starch and subsequent alcoholic fermentation to the activity of three kinds of moulds (such as *Rhízopus cambodja*, *Dematium*, and *Penicillium*) and one kind of yeast, these organisms being introduced in the *murcha* with the jungle products, through dusting with an earlier batch, from the air, or from the fern leaves used for wrapping the cakes. It will be noted that the enzyme amylase secreted by the moulds changes the starchy matter into maltose, which is next converted into glucose and ethyl alcohol by the maltose and zymase of yeast. Fermentation enzymes are also secreted by the moulds to a certain extent.

The different stages encountered in a brewery for the preparation of the *marua* grain may be briefly outlined as follows : The grain is cleansed and then boiled with water until quite soft. It is next allowed to cool and thoroughly mixed with the *murcha* ferment (in the proportion of two to four cakes to one maund of the grain), and spread on the floor of the house to depth of eight to ten inches, and kept in this position for about forty hours, during which time the moulds develop and spread throughout the mass and partly saccharify the starch during their growth. Afterwards the infected material is transferred to bamboo baskets which are then wrapped up in plantain leaves, probably to prevent the introduction of extraneous organisms from the air, etc. The grain is allowed to remain in this position for fifteen to twenty days, so that the organisms may produce the desired effect. After this period, the grain is ready for use. Some of the prepared grain is placed in a vessel consisting of a section of bamboo known as *chonga :* hot water is next poured into it and the mixture is left for a while. The liquor is next imbibed through a thin reed or bamboo pipe. The vessel may be replenished repeatedly with hot water until all virtue has gone out of the grain. The alcohol-content of the liquor when used in this manner is very low, less than one per cent. by volume ; no wonder, then, that men, women and children delight to sip it at all times from mornimg till night. It is only when the fermented grains are steeped in an equal amount of water for twenty-four hours that the percentage of ethyl alcohol rises to six to eight per cent.

The beverage is not only a solution of ethyl alcohol in water but it also contains other substances derived from starch, namely, dextrin, malto-dextrin, and maltose which has not been fermented. It is thus a food as much as a drink. The chief by-products (the nature and proportion of which depend upon the character of the grain and of the yeast) in all fermented liquids are glycerol (derived from the decomposition of sugar by yeast), succinic acid and fusel oil (formed from the amino-acids which, in turn, result from the decomposition of proteins in the grain and also in the yeast), formic, acetic and other acids (from bacterial side fermentation, etc), and the various aldehydes and esters.—*Indian Medical Gazettle.*

A CASE REPORT

BY

Dr. A. RAMAN,

Ayurvedacharya (A. I. A. V.)

CALCUTTA.

A female aged 24 was suffering for a long time from fever, inflammation of several joints, pain all over the body, obstinate constipation, leucorrhoœa of a long duration and emaciation. She was under the care of reputed Allopaths and Homeoopaths without any conspicuous improvement for a considerable time.

As is the fashion of the day—to call an Ayurvedic practitioner after the failure of other brother practitioners, I was called in to see the case. Eliciting the history of the case I came to form the opinion that she was not at all suffering from any venereal disease. I, therefore, had to follow the principles and the prescriptions of the Ayurvedic system of medicine.

Treatment adopted was as follows :—

1. Snehavasti (Introduction of medicated castor oil— $1\frac{1}{2}$ oz. with enema).
2. Sweda (Vapour-bath). This is water for bathing prepared with medicianl herbs as Dhuthura, etc,.
3. Massage and fomentation all over the boby, particularly on the affected parts (Mahadasamula Taila).
4. Medicines for administration (Yogarajaguggulu, 15 grains with Rasnadi Pachanam, twice a day).
5. Brihatvatachintamani pill with Saribadipachanam at bed time (10 p. m.)

DIET

1. The patient was given 2 oz. of goat's milk early morning with equal quantity of boiled water with a bit of sugarcandy powder.
2. Toasted loaves (not more than 2 pieces) with milk (2 oz.) with hot water between 10 & 11 a. m.
3. 2 biscuits with diluted milk at 3 p. m.
4. Little quantity of barley water mixed with hot milk (4 oz.) at 7 p. m.
5. Juice of grapes at 10 p. m.

The patient had no perceptible improvement for the first four days but she began to show signs of comfort in her bed. The temperature began to come down in a week's time and the intolerable pain too subsided to some extent. In the next week, the patient felt better appetite and she was free from rising temperature and so the previous diet was increased. At the end of the 2nd week, she was able to stand with some help. And the inflammation of the joints was better to a large degree.

During the 3rd week, Mahamasha Taila was prescribed for massaging in place of Mahadasamool Taila. The fomentation over the inflammed joints was stopped and rubbing of starch (Rice and flour boiled and made like jelly) was started all over the body for an hour. The patient then was given a small quantity of rice with fish soup and chicken soup at 11 a. m. and 5 p. m. respectively. By the end of the 3rd week, she was able to walk some distance and so was allowed to attend to the calls of nature unattended.

Duriug the 4th week, nothing in the treatment was altered and she made good progress. As the trouble from leucorrhoea was persisting, Douching was started with the decoction of Asoka and Lodhra bark during the 5th week and also the morning medicine was replaced by Piyushavalli pill and Asokarishta (one pill to be taken with honey followed by Asokarishta 1 oz). After a fortnight's douching and administration of medicines, the obstinate leucorrhœa was also improved greatly and without alteration the treatment was continued for a period of three months.

During this time, the suppressed menstruration was re-established and she regained her lost health.

Although she is now free from almost all the complaints, she is continuing enema and douche occasionally together with chicken soup, night pill and the massage as prescribed.

N. B.—I am always ready to give more light about the case if anyone requires.

:o:

Reports of Societies Etc.

"No punishment is too severe for the person who would betray the dependent sick".

When a physician prescribes a product which his experience and skill has demodstrated to be the best treatment for the condition, he has a right to that product—moreover, his patient is entitled to that product. Anything less than this will not suffice ! Not only is substitution of the medical product unethical, immoral and criminal but the manufacturer or retailer who encourages the use of his own or other imitations is not only jeopardizing his reputation and standing, but is betraying the confidence of his clients. Trading upon the gullibility of those who are not in position to know better is a despicable thing and to gamble the actual life of a client who depends upon the advice of his doctor or his pharmacist is a risk which no right-thinking man will care to assume.

Many cases are on record where substitutions made to look and smell like Antiphlogistine have caused much suffering, and instances are not rare where the actual life of the patient has been sacrificed through the use of inert and even dangerous substitutes. Not only should these imitators and imitations be discouraged but they should be condemned ! Every honest physician and pharmacist should voice his contempt for the scoundrel who would deceive the sick by supplying an imitation which will not only be of no benefit but may actually cost the patient's life.

Antiphlogistine, a scientific, therapeutic remedy is compounded to bring relief to suffering humanity—imitators deceive the suffering for a profit, often jeopardizing the health and life of those who are unable to recognize the fraud. Physicians should warn their patients and clients of the inert, harmful and dangerous substitutes which are now flooding India to be sold in plade of the genuine Antiphlogistine.

Antiphlogistine **cannot** be successfully imitated—the process and laboratory apparatus for compounding, the peculiar silicate of aluminum base obtained from privately owned mines are available to none other than the Denver Chemical Manufacturing Company.

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Resolutions passed unanimously at the Meeting of the Bombay Medical Profession held on 9th January 1933, at Blavatsky Lodge Building, Chowpatty, Bombay, under the Chairmanship of Dr. K. K. Dadachanji, President of the Bombay Medical Union.

This Meeting of the Medical Profession of Bombay resolves as follows :—

1. (a) That this meeting condemns in the best interests of the public and the profession the Scheme for a Hospital Saving Association of Bombay as proposed by the Surgeon-General with the Government of Bombay.

(b) That the Preamble to the Scheme is misleading in so far as the National Health Insurance Act of Great Britain, on which this Scheme is claimed to have been based, is really based on *entirely different principles* as defined in the following Resolutions.

Proposed by : Dr. F. N. Kapadia.
Supported by : Dr. M. E. Meherji.
Seconded by : Dr. R. A. Amesur.

2. That the National Health Insurance Act of Great Britain is based on the following *cardinal principles* which have been accepted by the medical profession in Great Britain, and which this meeting endorses and considers essential for incorporation in any genuine Scheme of health Insurance to be adopted for the Bombay Presidency, viz, that :—

I. (*a*) In addition to Medical Benefit, Sickness, Invalidity and Maternity Benefits should be provided for the insured persons.

(*b*) Income limit for those entitled to Medical Benefit should be fixed.

(*c*) There shall be free choice of doctors by patients, subject to the consent of doctors to act.

(*d*) Medical and Maternity Benefits should be administered by Insurance Committees on which there must be representatives of the medical profession, and not by the present Advisory Committee as proposed in the Scheme by the Surgeon-General.

(e) All questions of professional discipline should be decided exclusively by representatives of the medical profession, and not by the Advisory Committee as proposed by the Surgeon-General.

(f) The method of remuneration of medical practitioners shall be decided by the Insurance Committee of medical practitioners.

(g) Adequate medical representation shall be assured on all the Committees appointed for administration of the National Health Insurance Acts.

II. None of these principles are to be found in the condemned Scheme.

Proposed by : Dr. P. T. Patel.
Supported by : Dr. A. D. Mastakar.
Seconded by : Dr. Mrs. Dosibai J. Dadabhai.

3. That under the National Health Insurance act, every registered medical practioner is entitled to be on the Local Panel which he chooses, and is not appointed by any Advisory Committee as suggested in this Scheme.

Proposed by : Dr. Sorab J. Popat.
Supported by : Dr. V. B. Desai.
Seconded by : Dr. A. D. Mastakar.

4. This Meeting further resolves that, in place of the Surgeon-General's Scheme, which is based on uncertain Voluntary Contributions, and not on the Compulsory principles of the National Health Insurance Act, it is essential in the vital interests of the public that an adequate Scheme for Compulsory Health Insurance should be introduced early in the Presidency of Bombay, and for that purpose a Bombay Health Insurance Act should be enacted by the Bombay Legislative Council.

Proposed by : Dr. K. K. Dadachanji from the Chair.

5. That this Meeting of the Medical Profession of Bombay earnestly draws the attention of the Government to the urgent need of formulating a Scheme for Compulsory Health Insurance for the Presidency of Bombay, and promises its co-operation if

the Scheme is drafted in the best interests of the public and the profession, as suggested in these Resolutions.

Proposed by : Dr. M. B. Thakore.
Supported by : Dr. G. G. Wadhwani.
Seconded by : Dr. Sorab J. Popat.

6. That in order to carry out the above-mentioned object, this meeting appoints a *Medico-Economic and Health Insurance Committee*, with power to co-opt, consisting of the following members :—

Drs. K. K Dadachanji, the Hon'ble Sir Nasarwanji Choksey, M. D. D. Gilder, S. P. Kapadia, G. V. Deshmukh, V. G. Rele, A. S. Erulkar, S. B. Gadgil, Sorab J. Popat, M. B. Thakore, P. T. Patel, D. H. Dudha, J. E. Spencer, V. B. Desai, F. N. Kapadia, D. D. Sathaye, Mrs Dosibai Dadabhai, N. A. Purandhare, S. N. Navalkar, H. N.. Tilak, U. Narayan Rao, M. N. Talati, M. E. Meherji, A. D. Mastakar, and J. P. Patel.

Proposed by : Dr. S. B. Gadgil.
Supported by : Dr. M. B. Thakore.
Seconded by : Dr. J. P. Patel.

7. That this Committee shall continue to function and consider the best means of affording medical relief to all sections of the population, and in particular, formulate a draft of a Bill for a Compulsory Health Insurance Act for the Bombay Presidency on the lines of the National Health Insurance Acts of England, Germany and other countries, modified to suit our circumstances, and take all necessary steps to safeguard the economic interests of the profession.

Proposed by : Dr. M. N. Talati.
Supported by : Dr. N. H. Vakil.
Seconded by : Dr. A. V. Shiregarpure.

8. That the Chairman of this meeting be authorised to send copies of these Resolutions to the Minister for Local Self Government, Bombay, the Surgeon-General with the Government of Bombay, the Deprrtment of Education, Health and Lands—Government of India, Members of the Bombay Legislative Council, Members of the Municipal Corporatoins and Local Boards in the

Presidency of Bombay, the Employers of Labour and the Trade Unions in the Presidency of Bombay, all Medical Associations, Sympathisers, and the Press of India.

Proposed by : Dr. J. D. Khambata.
Supported by : Dr. S. H. Oomrigar.
Secbonded by : Dr. M. E. Meherji.

Health and Hygiene.

EFFECT OF COLOURS ON THE HUMAN SYSTEM.

It is generally supposed that each different colour has its peculiar influence upon the body through the mind. There are certain colours that are disagreeable to some people, while to others they are pleasing. But fortunately people are not subject to the same colour so continuously as to make its effect anything more than a passing feeling of antipathy or repulsion.

An article recently came under our notice in which the writer had seemingly made study of the effect of colours upon the brain. He states that purple is the most dangerous colour, having a fatal effect upon the mind. That if a person were confined for a month in a room with purple walls, with no colour but purple around him, by the end of the month he would be a mad man.

Scarlet, this writer claims, is as bad, but has a different effect. It produces a madness that drives a person to kill his friends, especially his nearest relatives. Scarlet has something of this effect on animals. It will drive a bull or tiger to desperation, causing them to fight till death.

Blue has a drug like effect on the brain. It stimulates the brain and excites the imagination, but if you get too much of it and cannot get away from it, its effect is terrible.

Green is the king of colours. It is soothing in its effect, preserves and strengthens the eyesight, and no amount of it can do any harm. The sky which appears to be blue is really white, tinged with green, and it is only the distance and clearness that make it appear blue. Green is so soothing that it helps the system to fight disease, and, therefore, all sick rooms and hospital wards should have everything possible about them coloured green. Sage green is the most soothing tint of all.

Yellow is one of the healthiest and cheeriest colours and it will make a dark room bright where even green would be cold and depressing. But solitary confinement within a yellow cell for a month or six weeks would hopelessly weaken the system and produce chronic hysteria.

Sheer dead white walls will destroy the eyesight in a short time, while the effect on the brain is so maddening that the blindness is almost a relief. An example of this is found in the Arctic explorers who have to wear green-tinted glasses to avoid snow blindness, which is really white blindness.

The above deductions concerning the effect of colours are based upon the supposition that a person were confined for a month or six weeks in a room where one solid colour predominated to the exclusion of all others. Whether the colour alone would have the effects as above stated we are not prepared to say, but we think, however, the solitary confinement would have something to do with the mental condition. That alone would be enough to set some people stark, staring, raving mad, even if they were surrounded by the most soothing of all colours, green.

But if there be any truth in the effects of colours it would be well to give attention to it. According to the above theory, a green room would be a very soothing room for tired nerves and weary brain, a good room in which to rest after a day or toil and worry and distraction.

A red room if unrelieved by any other colour would not be so conducive to rest, as red excites rather than soothes. Red is what we would call a hot colour. There is nothing that looks so hot as a red dress in the summer. It gives off a glare in the sunshine that is very irritating to a sensitive person. But in the cold of winter there is nothing so warm and cosy as a red room or a room in which red predominates. A red light will throw warm glow over a room and make it very inviting on a cold night. Red is stimulating, quickening and sharpening to the intellect. It arouses and stirs the soul. In the language of poets, the rich, dark, voluptuous red poppy is the flower of passion, that power which sways and moves men to the highest and the no blest achievements or to the lowest and basest deeds.

A yellow room would be a bright. cheery room, especially on dark, gloomy days. A blue room would look cool and refreshing in summer, but would lack warmth and glow in the winter.

But perhaps no room should be furnished wholly in one colour. It is well to have a predominating colour, but relieve it with some other colour that blends and harmonizes with it.

There are certain tints of colour that are very irritating to some people. Even a little of this colour in a room will annoy and set on edge the nerves of a sensitive person, just as a picture hung crooked on the wall or a table scarf sagging at the corners, or a bed made lop-sided with the sheets pulled down in one place and tucked up in another,—there is something out of harmony and the sensitive person feels it.

No double the antipathy felt toward certain colours is often the effect of the association of the colour with some unpleasant occurrence. The colour has unconsciously become so blended with that which has given us pain or sorrow or trouble that it has much the same effect upon us as the remembrance of the unpleasant circumstance with which it is associated, and we form a repulsion or antipathy for the colour without recognizing the cause.

The primary colours. violet, indigo, blue, green yellow, orange, red, unless one is saturated with them, are not so apt to produce an antipathy or repulsion as are the various tints of these colours. For instance, terra, cotta, heliotrope, cerise, etc.

But every one should be guided by his own feelings, and surround himself with those colours which are most pleasing to his eye and most restful in their effect. Often times two colours are placed together that are so inharmonious that they rasp the nerves and torture the mind of one person while to another the combination may be pleasing or its incongruity be entirely unnoticed. It is altogether a matter of individual peculiarity. But the effect for good or ill.which colour exercises upon the human body through the mind should not be ignored, especially in the sick room, where just such little things as these assume so much importance.

TO AVOID WRINKLES.

DON'T indulge in the bric-a-brac habit ; it is responsible for more wrinkles and crow's feet than age or illness. Learn of the almond-eyed Japanese the secret of retaining a smooth, unfurrowed face. The secret is that she displays nothing in the drawing room except a lovely flower and a screen.

Don't get tired if you care to preserve the pristine beauty of a rose leaf complextion.

Don't shop the whole day long in feverish excitement, running bargains to earth. Not only are dress and temper ruined, but complexions as well.

Don't alwaws be doing something, have intermittent attacks of idling.

Don't neglect the afternoon "forty winks." If you don't rest, your mirror will show a new line in your face every day.

Don't sleep with the hand under the cheek ; it will numb and wrinkle the skin.

Don't let the jaw drop just at the moment of falling asleep ; it tends to make lines on either side of the mouth.

Don't use powder on the face. It works its way into every line and digs it deeper and deeper.

Don't be afraid of friction for the face ; freshness is prolonged by the tepid bath in which bran has been stirred, followed by long friction. This keeps the blood at the surface.

Don't indulge in the essentially feminine habit of "knitting the brow ;" take life strenuously.

Don't always be thinking of something. Some times think of nothing.

Don't let a day pass without relaxing limbs, muscles, and expression.

Don't fret and don't worry—these are the best cosmetics. Worry is called our national disease.

Don't "putter;" either work, rest, or play. "Puttering" is twin sister to worrying.

Don't put too much of yourself into the ordering of the household or the management of servants if you wish to keep fagged cheeks and hollow eyes at a distance.

Don't get wildly excited if Bridget has neglected to dust the legs of the hall table. Neither the welfare of your family nor that of the nation is involved.

Don't exhaust all your reserve force over petty cares. Each time that a woman loses control over her nerves, she moves a fraction of an inch further on in the path that leads to premature old age.

Don't forget that an ounce of prevention is worth several pounds of cure. It is better to begin to take care of complexions before they begin to show wear and tear.

Don't think it supernaturally virtuous to disregard beauty. The divine gift of beauty is the second great blessing of life—health being the first.

SAVE THE CHILD.

THERE are times when mere words fail—and you can only utter inarticulate sounds. Like some stricken animal you moan out your anguish. Your very soul seems crushed.

A child that you love lies on the sick bed—tossing from side to side ; or lying torpid in the stupor of semi-consciousness.

Death seems near.

And you love that child with a mad, protective fervour. It is your own flesh and blood. You have watched it grow from a tiny helpless infant. Day after day you have sheltered and loved it. Is has twined itself into your heart and life. It seems part of you. It depends on you.

And now it is going away.

The very thought is maddening. 1st here any experience that will sear the soul with greater anguish than this ?

For more than thirty years, the problems of saving child life have been keenly interesting to me.

We are all human ! None of us are infallible ! We all make mistakes. Perhaps I am labouring under a delusion now. But to me, the mortality among children is simply appalling ; and according to my viewpoint, mostly due to carelessness or incompetence ; incompetence often carried to such degree, that it can often be termed nothing less than murder. Hundreds of thonsands of little lives are needlessly snuffed out in this manner, every year. And no complicated scientific training is needed to save them. Only the simplest sort of knowlege is required. Some people would call it "horse sense."

Over-feeding is the great predominant cause. A very small percentage may perhaps be due to improper feeding, or to undernourishment, or to impure air or water or lack of exercise.

Your child develops convulsions, has a fever, a cold, or any of initiatory symptoms associated with diphtheria, scarlet fever, whooping cough, etc. You rush for the doctor. But every minute is precious. A few seconds' delay may mean death.

Your first act should be to induce vomiting. Hold the child face downward. Put your finger down its throat and thus force the stomach to empty itself.

Next raise the windows as high as you can ; pure, fresh air contains the oxygen necessary to life. A child may die for the want of the energy secured from oxygen.

Keep the child warm. Use hot watter bottles, clothing, or whatever may be necessary. The hot abdominal pack is next advised. Hold an ordinary bath towel by its two ends. Immerse as much of the towel as possible in boiling water. Wring it dry, and fold it over, until the hot, moist towel can be placed next to the skin—all the way around the child's little body—from hips to arms-pits.

Dod't burn the child, but apply the towel as hot as can be borne. In cases of fever, cold towel may be used in some cases. But a hot pack as described will usually induce such profuse perspiration that the bodily temperature will be quickly reduced.

A small enema with a rectal syringe should be given immediately before or after the hot pack. This will be found valuable in assisting to cleanse lower bowel.

And then let the child rest. Too much treatment can also cause death.

When the doctor comes, your efforts in meeting the emergencies usually will be commended and if the doctor understands that you prefer to avoid medicines in treating your child, your wishes will usually be respected.

You cannot afford to risk the effects of medicine on the delicately adjusted nervous organism of a child. If the means suggested have not entirely eradicated the spmptoms, use daily the hot abdominal pack for two or three hours in the morning and a hot spinal pack in the evening. You can depend upon the hot spinal pack for putting the child to sleep. The effects of the hot packs can be increased and prolonged when desired, by applying a hot water bottle to the spine. The efficacy of these remedies is marvelous.

Be sure to encourage the child to drink freely of hot water or cold water. If it does not care for plain water, you can flavour it with salt, lemon juice, or strained honey.

Give no nourishment until the child begins to recover. And then "play safe" by using cow's milk and fruit juice to tho extent desired by the appetite. Do not use other foods until recovery is assured.

Do not fail to encourage the child to take water freely as suggested. Neglect in this regard may mean death. And remember that when a child is ill the stomach cannot digest food. Even a few mouthfuls eaten at such time may fill the system with poison that will be direct cause of death. I have fasted infants of all ages from one to seven days with distinct benefit. When such a fast is needed and water is used freely, no harm can result. The lost weight is quickiy regained when feeding is resumed at the behest of a keen appetite.

(Bernarr Macfadden in Health Talk.)

THE RIGHT WAY TO GO TO BED.

DON'T just jump into bed any old way. Don't jerk your clothes off and throw them helter-skelter around the room, and then tumble into bed.

Don't think that because you have come home late and are weary and fagged that the best thing to do is to roll into bed as quickly as possible.

If you want to sleep well and rise rested and refreshed in the morning, you must go to bed right.

First, take off your clothes and hang them up. Don't throw them on a chair or on the floor. Hang them up where they can be aired and the wrinkles have a chance to straighten out.

After undressing, brush the teeth, wash the face and hands and neck perfectly clean. Then with the hands, sponge, or towel rub the body over quickly with cold water, giving special attention to the feet. Rub briskly until dry, put on the right clothes. Now brush the hair thoroughly and, if you wear it long, leave it loosely braided for the night.

Now put out the lights, open the window and go to bed Relax the body and let the bed hold you. Of course everything about the bed should be immaculately clean and sweet.

That is all there is to it,——clean body, clean clothes, clean, wholesome bed, plenty of fresh air, and you will forget the world and drop off to sleep like a tired child, to waken in the morning rested and reinvigorated, with a fresh stock of vitality to meet the duties of the day.

See to it that you go to bed right every night.

A GOOD GERM-KILLER.

THE best disinfectant, the most effective germ-killer, is just simply pure, unadulterated sunshine. Bacteria cannot stand the direct rays of the sun. It kills them in a few hours.

Hang out your sheets and blankets and clothing where the sun can shine directly upon them. The sun-shine will disinfect them thoroughly, leave them sweet and wholesome, with no ill-smelling, sickening odours clinging to them.

Everyday open the windows wide, raise the blinds and let the sunshine stream into your rooms. It will purify them and make them more fit to live in. Wherever there is mold or damp, turn in the sunshine. It will silently but surely dispose of the unwholesomeness of mildew or mold and make clean and healthful every spot it reaches.

Walk in the sun, sit in the sun, leave in the sun-shine all you can. Don't live in a room that the sun does not shine in at some part of the day. You may be able to withstand its unwholesomeness for a time, you may get so used to it that you will not notice its musty smell, but all the while you are robbing your system of the very essence of life—sun-shine. Move into a room with a sunny window and note the difference Cheerful, bright, healthy, with no trace of mustiness or dampness. It is hard to have the blues or be depressed or despondent in a sunny room.

Plants and animals thrive in the sun-shine ; without it they sicken and die. The child who lives in some basement or cellar is pale and puny ; the one who plays in the sun-shine and fresh air is strong and ruddy.

Just sun-shine. Free to everybody, and yet it is the most potent healer, the most radical germ destroyer, the greatest preventive of disease.

BOYS OR GIRLS AT WILL.

HERE is a very simple, but infallible law governing the predetermination of sex. If conception takes place withln three days after the menstrual flow has ceased, the offspring will be a girl—no failure in this. Between the fourth and seventh day after the period the offspring is as likely to be male as female. If conception occurs on the eighth day or any time thereafter up to the twentieth day, the child will *always* be a male—no failure here too.

We advise childless couples to live apart for a month and then proceed in accordance with their desires for a male or female child, and if you have been married more than three years, we advise fertilisation on the third day. The baby will be a girl. Then wait until the Miss is weaned. Again live apart for a month and secure fertilisation on the eighth day. The baby this time will be a boy.

Like all of the great laws of Nature this one is the essence of simplicity—*David H. Reeder*, M. D.

AVOID. FATIGUE.

ONE of the finest and most effective little combinations of whistle and red light with which Nature ever danger-signalled recreant and unthinking humans—is fatigue. Yet we have been trained, by centuries of immoral precept, to disregard fatigue—to ignore the well-meant warnings, and plunge bull-headedly along our devious ways which is the chief reason why scores, if not hundreds of thousands of worthy, but misguided, citizens are now liviug on the border line of nervous and physical collapse, and very rapidly getting no better.

When these misguided ones break down from the accumulated results of this fatigue—as breakdown they must—they blink in dazed fashion, and look about for something or some one upon whom to hang the blame for their dereliction.

Yet the cause is usually as plain as a pike-staff—as simple as finding the answer to two plus two, on one of these super-human adding machines.

Now, just what is fatigue ? What causes it ? And what dose it do to us ?

First, there is the chronic fatigue of Weary Willie, and his sister, Wilhelmina. These worthies have an inherent disinclination toward exertion of any kind—an ineradicable distaste for contracting and expanding voluntary muscle fibre. This apathy may be a state of mind—just as bragging about Boston is a state of mind. This form of fatigue is removed only by death, or by some great physical or spiritual regeneration.

Then there is *chemical* fatigue, due to the accumulation of fatigue wastes or fatigue poisons in the system. This is a thoroughly normal condition—when it doesn't go beyond normal bounds. Every living individual, fortunate enough to earn this superb quality of fatigue, is heartily to be congratulated. It's the soporific that brings the blessed nepenthe of sleep to heavy eyelids more effectively than anything that was ever poured out of a bottle, rolled up in a pill, or squirted from a hypo.

Focal infections, and toxins from decaying teeth and septic gums, may be contributing causes to fatigue—as are also the poisons absorbed by auto-intoxication resulting from constipation.

The reaction from excessive indulgence in stimulants— such as tea, coffee, coca-cola ; or the direct action of narcotics—such as headache powders, tobacco and mince pie—are also frequent causes of fatigue.

Then there is the fatigue that results from exhaustion of nerve force—from the draining of nerve cells of their vital energy. This is the type of fatigue that brings about most of the nervous breakdowns of modern life, and causes the vast increase in the army of neurasthenics.

To completely remove it—and *keep* it removed—is a life-time job, with no vacation. It implies that one must make a business of conserving nervous energy—of building nerve force—of scrupulously guarding the balance on the credit side of the column in Bank of Life.

And yet most frequently the predisposing cause of fatigue from nerve exhaustion—the condition *back* of the nerve exhaustion that comes to produce depression—is chemical fatigue, and the presence in the system of the toxic products of chemical fatigue.

These chemical substances are varied in their nature, but consist chiefly in carbon-dioxide and lactic acid, which, as investigation has shewn, are highly inimical to protoplasmic activity.

They are produced quite normally by an overdose of motion—an over-activity of wear and tear—or by an under-activity of the process of repair.

Now this making and remaking of the tissues is a process continuous during life. Michæl Foster likens it to the Dance of the Atoms, which, by the double process of making and unmaking, are caught up from the foodstuffs and transformed into parts of the whorls of the living cells. Linked for a while in the intricate figures of the Dance of Life, they finally loose hands, and slip back into the blood as dead matter.

Whether the muscle be active or at rest; this change is perpetually going on. Some part of the capital of the living tissue is being spent—changed into waste matter. Some of the new food material is being raised to living capital.

When the muscle is called upon to expend extra activities, the destruction of living cells is naturally more rapid. More living capital is being spent than can be renewed. This leaves the tissue impoverished, and necessitates a period of rest to make good the loss of organic capital,and to restore the muscle to its pristine power.

The drain on this living capital, in excess of its production, brings about fatigue—in as much as certain substances (chiefly oxygen and carbo-hydrates) necessary for the activity of the organism— have been consumed, and an excess of waste products accumulated.

This creates a diminition in working power, manifested in different ways on different tissues. The various glands of the body secrete their fluids less freely—as everyone knows who has tried unsuccesfully to digest a full meal while over-tired.

The excretory organs are affected in the task of attempting to strain fatigue poisons from the blood. Kidney disorders may result from this inability to prevent the passage of albumin from the blood into the urine.

Over-fatigue may also cause the heart to become dilated. The heart beat may be quickened—so that the normal resting power of the heart between beats may become shortened. If this abnormal activity is forced, day after day, for an over-long period of time, the consequences may be disastrous.

For it is not possible to convert and utilize more than a given amount of food, or to force more oxygen into the system than can be utilized by the tissues. When the balance between orderly reconstruction and disorderly destruction is turned in favour of destruction we know—or we *should* know—that we are tired, and need a rest.

If we don't know it, or don't heed it, we are most certainly hanging out the "Welcome sign to Bright's disease," a nervous breakdown, and to every conceivable disorder and infection that takes advantage of lowered resistance and-chronic toxemia.

The crucial test of physical fitness is the capacity to work unfatigued. If the digestion is unimpaired ; if the night's rest builds back the destroyed protoplasm ; if the ability to perform a high quality of work is maintained ; the bodily conditions may be said to be normal, fatigue will be only a transient phenomenon—effectually wiped out by the proper recuperative measures.

If, on the other hand, one wakes in the morning more tired than when he went to bed the night before ; if the appetite is capricious, and capacity for digesting food is lowered ; if nerves and muscles alike cry out against continued exertion ; it were the better part of discretion to obey old Dame Nature's ballyhoo, and slow up, pronto !

With a normal amount of exercise only carbonic acid is formed With too violent, or too long-sustained exercise, however, lactic acid appears, together with a relative deficiency in the supply of oxygen taken up by the contracting muscles.

This is one reason why it is neccessary, day and night, to breathe into the system liberal quantities of pure air—one of the most important of all important essentials in overcoming fatigue, and in promoting physical, nervous and mental efficiency.

The next most important method of preventing fatigue is proper physical exercise. If one is in the "pink of physical condition," his resistance to fatigue is increased—he is generally more "fit." Most adults, especially those whose works is done more with the head than with the hands, are physically unfit.

By appropriate training, however, their endurance could be vastly increased, their resistance to fatigue enhanced, and their capacity to withstand prolonged strain greatly improved.

Experiments have shown that physical endurance can be doubled by strict attention to securing a proper balance in the diet. These experiments have also demonstarted that by proper exercise one's work capacity is doubled.

So, by the same token, if both diet and exercise are properly adjusted, it is not at all unreasonable to believe that in some instances efficiency might be tripled or even quadrupled.

Monotony of interest, and the repetition of some more or less mechanical action are infinitely more likely to produce fatigue than are enjoyable occupation and diverse action. Therefore, if it is at all possible for you to get more joy out of the job, or to get a job carrying joy with it, do so.

Massage is excellent for overcoming fatigue. When the fatigue poisons are actually squeezed and kneaded out of the muscles, and thrown into the circulation for rapid elimination, as they are with correctly employed massage, it stands to reason that the effects cannot be otherwise than highly beneficial.

For the fatigue of nerve tire there is the healing balm of music the relaxation of laughter and social chatter, a change of air and scene, golf and fishing, freedom from effort, and blessed *rest.*

And for all kinds of fatigue, no matter what the breed, there is Sancho Panza's panacea, sleep. No better medicine ever was or ever will be invented.

(*Edwin F. Bowers, M. D. in Health Talk*).

USE OF HOT WATER.

THERE is no article or remedy in the whole range of pharmacopia, for most ailments flesh is heir to, equal to hot water. While it is true that it may be used too long, and so abused, yet there will no bad after effect follow, as from alcohol.

If a person has catarrh of the stomach, a cup of hot water, drunk as soon in the morning as it can be obtained, will cleanse and wash away the matter which accumulates through the night, and go a long way toward effecting a cure.

If there is pain in the chest, liver, spleen, or any part of the body, hot water is the remedy par excellence to remove it. Instead of inflamming, it will soothe and overcome inflammation, and help remove the cause,

Yet, after it has accomplished its work, and produced the desired result, it should not be used longer. There is nothing better for sour stomach, and it is much safer than soda or saleratus.

Water is an indispensable element, and the more men dispense with substitutes the better for them. If people would boil their drinking water, and let it cool, there would be less kidney trouble, gall-stones and gravel in this country in a very short time, and much less suffering, and the scientific surgeon would have less use for the knife, and the people for drugs.

As a large per cent. of the human system is composed of water, it requires the supply to be kept good to sustain its normal vitality. Water, and water only, is Nature's beverage.

Health and Hygiene.

THE DRUG DELUSION.

Writing in the January 1933 issue of "Nature's Path,"

DR. EDWARD EARLE PURINTON SAYS :—

HERE is a question of great importance, that was never answered in detail so far as we know. Why do millions of American people have a strange notion that drugs will cure disease ? The notion seems to be a blatant blend of superstition, imagination, obsession and imitation. We view it as a funny yet sad reminder of the witchcraft of the dark ages, whereby huge numbers of mortals were ogled into believing something that wasn't so, for the profit of the witches. Are drug doctors the witches of today ? You can form your own conclusion. We politely refrain from expresing an opinion.

What is the name for a queer notion or fixed idea not based on fact ? Delusion. A person clinging to a manifest delusion is pitied by his friends, who try to dissuade and disentangle him from the psychic web of error and danger into which he has fallen. How shall a populace caught in a delusion be safely warned and rescued ? The notion that sick people can recover health by swallowing drugs is a prevalent delusion, from which a merciful deliverance may come when the causes of the notion are traced and removed.

Why does the average American hasten to gobble a drug when ill, supposing that it will cure him of whatever ails him ? Because he has never studied out the psychology of human action, therefore is unware of the impulses and forces animating his procedure. Like a child, he acts first and thinks later—if perchance he thinks at all. Consciously or unconsciously, the typical drug-taker seeking health is moved by an aggregation of subtle influences and motives that prompt unscientific resort to medication. The drug delusion is a complex of ten causative factors. We list them for you to consider.

1. Ease. Medication is inviting because it encourages laziness. The average invalid would rather swallow pills or potions than reform the unhygienic habits of living, that probably made him sick. He won't spend the time, thought and effort needed for genuine health production.

2. Haste. The hope of getting well in a hurry seems attractive, but is often deceptive. Recovery follows patience, not speed. Many a drug by merely deadening or alleviating symptoms falsely promises quick recovery, and entices the patient hugely and swiftly.

3. Habit. Most Americans have from childhood been dosed with medicine for all kinds of ills. They turn to medicine automatically and unreasonably, acting out a mental imprint of a racial custom. What an exhibition of childishness !

4. Authority. A national reputation for infallibility has been shrewdly cultivated by the medical profession. What a doctor says goes with an ordinary person, who never thinks of doubting or refusing a medical prescription. The medical doctor has become a dictator.

5. Publicity. Flaming advertisements of a multiplicity of drug concoctions appear unceasingly in the newspapers, magazines, drug store windows and elsewhere. The subconscious mind of the observer is so favorably. and deeply impressed that he looks for the advertised medication if he imagines he needs it as a health restorative.

6. Popularity. The crowd seeks drugs for disease, and most mortals follow the crowd. Individuals by habit and choice think and act for themselves, but only a few American citizens are individuals. The majority of them favor gang rule.

7. Complicity. When a person falls ill, he hastens to rely on the tender mercies of a doctor, a druggist, a nurse, perhaps also a group of hospital officials. What can the poor patient do if they all conspire to administer medicine ? He must swallow it or be therapeutically deserted.

8. Fear. Illness creates apprehension. The typical invalid worries over trifling symptoms, and lets the anxiety force him to take the first medication offered. A blind faith is perhaps better than none, yet if it weren't blind it would be more effective.

9. Mystery. A veil of professional secrecy has a peculiar fascination for many people. Knowing this, allopathic doctors keep their patients in total ignorance of the constitution and operation of allopathic remedies. The patients are awed into acquiescence by such manifestation of occult lore. They mistake knowledge for wisdom.

10. Magic. A favorite amusement of children is to play impressively that they are magicians, able to work wonders of all kinds. Medical magic appeals to children of all ages. A real physician is not a magician, but a childish doctor would like his patients to think he is. Accordingly grows the preponderance of medical magic.

We pause here. Enough is enough. You have read the first complete psychological explanation of the drug delusion ever printed. We cordially invite you to make additions if you can, getting also a bit of salutary fun out of the performance.

Let us add a precaution against misunderstanding. We are not opposed to druggists. Many of them are sincere, honest, altruistic. A good drug store provides numerous aids to health, such as fruit juices, not products, vegetable foods and extracts, safety appliances, emergency antiseptics, other beneficial articles. The trouble is that druggists do not know how harmful drugs may be. All pharmacists and druggists should be trained in the science of natural healing. When they are so taught, every drug store would naturally be a haven of health

HONEY AS A FOOD

Honey as a food has been recognised by almost all countries of the world and recently we come accross an interesting article on the subject by Dr. Lewis C. Breaker which may seem interesting to our readers.

IN THE olden days, before trade with the tropical countries introduced cane sugar to the markets in the more temperate regions, honey was the most common sweet substance available for human consumption. At the present time, with the advance of so-called civilization and modern agriculture as well as manufacturing and transportation methods, cane sugar appears on our market at such low prices that we are apt to forget the proven benefits of honey. The hundreds of thousands of instances of bad teeth among school children can be traced directly to the substitution of white refined sugar for honey in the diet.

In the early days, honey was strictly a "wild" sweet. The modern hive was unknown and human beings had to depend upon finding a swarm of bees about hollow trees or out of the way crevices in rocks. Even to-day in many parts of the world, "wild" honey is still gathered. On account of the inaccessible places where it has been deposited in the deep crevices and the difficulty of extracting the irregular combs, much of the honey is lost and wasted. The idea of "keeping bees" is a comparatively late innovation, but it has eliminated waste and has made this sweet available to the masses at a price within reach of everyone.

Until a few years ago, honey could be acquired only in strained form and the poor methods of extracting permitted much of the refuse to remain, with the result that the product was rather uncertain from a sanitary point of view. Now, centrifugal machines with an intricate straining system are brought into play and a clean, pure honey is produced.

Although honey is composed chiefly of different sugars, it is not only harmless but highly beneficial as a food for human beings. The "making" of honey by the bees, a process not entirely understood, results in a predigested sugar from which the energy is liberated during human digestion more quickly than other fuel foods—starch and fat.

The average honey contains 18 parts water, 78 parts carbohydrates, 0.2 parts minerals and nearly 4 parts of undetermined substances, such as pollen grain, gum, bee glue, formic acid and volatile oils.

There are really two kinds of honey—floral or normal and honeydew or abnormal. The floral is that made from the nectar, a sweet liquid secreted by flowers. The honeydew is a sweet substance deposited on vegetation by plant lice and other insects.

The entire process of honey making is still a secret from the scientists. However, it is authentically proven that the chief materials that the worker bees bring to the hives are nectar, pollen and propolis. The nectar is sucked from the flower by the bee with its long tongue and when it is swallowed, it goes into the honey sac where certain chemical changes take place. Pollen, a fine powder, formed within the anther of a flowering plant, is very rich in proteins and is important for food to the young and developing bees. Propolis is a glue-like substance which the bees utilize to render the hives waterproof, fill up the cracks and strengthen the edges of the comb The wax which plays such an important part is secreted by special glands in the abdomen of the bee.

Honey contains several kinds of sugar—some yet unknown. The most common are sucrose, dextrose and levulose, as well as dextrin. Sucrose is a white, crystalline compound and is the same chemically as the sugar of cane, beet and maple. Dextrose is a sugar which is found in vegetables, animal organisms, etc., and is less sweet than cane sugar. Levulose is designated as fruit sugar. Dextrin is usually present in the sap of plants aud seems to have its base in starch. All of the sugars are pre-digested.

The minerals which are the most abundant in honey are magnesia, lime, phosphoric acid and iron.

While there are only two kinds of honey, there are many different flavors. These flavors depend on the blossom from which the nectar was extracted. Different localities produce different flavors and while they are quite dissimilar in color and taste, they contain approximately the same chemical content.

All honey is pre-digested and may be eaten with perfect safety, whether the nectar comes from orange blossoms, sage, clover, buckwheat, alfalfa or a variety of flowers.

Through the knowledge that the sugars in honey have undergone a chemical change in the bee, scientists have universally agreed that honey is one of the most healthful foods for mankind.

NATUROPATHY OR HEALING BY NATURAL WAYS IN INDIA.

K. W. Bhairava Murty, B. A. of Bezwada, India, tells us of the progress of Naturopathy in India through "Nature's Path."

Of course, it will be noticed that the systems of Ayurveda and Unani generally rasort to simple herbal remedies analogous to those in the system of Father Kneipp; but they do not seem to be averse in principle to the use of even inorganic drugs in the treatment of disease. As no regular research has yet been made by competent scientists into the chemical constitution of these drugs and into their modus operandi upon the human system in its pathological conditions, it is not yet possible to pronounce any fair judgment on their merits or demerits as to whether they stand en masse worthy of total condemnation as allopathic systems falling under the same connotation as the western Allopathy, whose own servants have not hesitated to pronounce it the enemy of human health not to speak of the disapproval which all of us as the exponents of Naturism feel bound to accord to it.

Of course, Naturopathy has by now attained a stage of self-reliance, strength and general approval of its fundamental doctrines, so much so that the advocates of other systems feel compelled in their conscience not only to admit in general way the efficacy of Naturism, but even to seek for a justification of the usages in their own systems by claiming for their drugs, certain processes of operation similar to those now claimed by certain systems of Naturopathy wherein the resort is made to artificial applications or stimulating reactions of a mechanical, chemical, physiological or even psychological character. Like our naturopathy they also plead that their methods and drugs "help Nature's processes" and that their treatment is also a Naturopathic one. If the resort to artificial aids of an extraneous kind is to be recognised even by Naturopaths and if the crucial test of their being acceptable to Naturism, is whether on the one hand they help the spontaneous process of Nature already initiated in the body in pursuance of its curative programme or whether on the other hand they tend to obstruct, suppress, or even destroy such spontaneous process, then the distinction between what is Naturopathic and what is Anti-Naturopathic treatment lies, not in what substances or agencies are used in the treatment, but in what way the processes generated in the body by reaction to these substances or agencies stand in relation to the spontaneous processes already set up in the body by Nature, unaided, yet all powerful. This plea of "Aiding Nature" seems now-a-days to be in the mouth of every physician of whatever persuasion, Naturopathic or otherwise ; but this clearly indicates a universal homage paid to Naturism by all systems of treatment, accepting Naturism's fundamental doctrine that Nature, the Holy power, is the only healer. and that what any one can do is humbly to study her own line of cure and help her in such a line, if help indeed is needed and can be given.

But the genuine system of Indian Naturopathy, immemorial in its origin and expounded in the ancient Upanishads only as a brief statement of fundamentals for elaboration in the practices and writings of subsequent ages and generations, is the system of yoga, a good many of whose aspects must have been quite familiar to you. It must be stated that the able exponents, who have from time to time gone across the Atlantic and explained it in America in its one aspect or other, could not have possibly dealt with all its branches or have made any attempt to present it as a coordinated whole with its several parts shown in proper inter-relation, giving at least a general idea of the great system of yoga as a scheme of emancipation from human misery, started, maintained, and conducted to perfection by Nature herself, the Divine Power inherent in all. They were no doubt able exponents in particular systems, whose main concern was the exposition of their own system, good and blessed in itself. They were not concerned with the exposition of the vast framework underlying and commonly inspiring and regulating the work of each system. I may even take the liberty of doubting if even these venerable adepts had themselves mastered the knowledge of that universal framework. We are led to say this on account of that knowledge and the practices not being now available even in this country on the surface, or for a light attempt, or even at one place, or from one person, but lying severally in the possession of unknown masters scattered at unknown and very remote centres, and not easily accessible for so many reasons It indeed requires an infinity of personal application, research and collation of results of a band of devoted servants working for a long time over the whole land, in cooperation and shrinking from no sacrifice. I may assure you that I am not indulging in mysticism of any kind, but that I am talking of the bare practicalities. This system of Naturopathy concerns itself, not with the cure of this or that disease or rather unhappiness of man in particular, but is efficacious against one and all forms of misery. The highest spiritual sanctification and beatification of the individual is indeed its goal ; but its help may be invoked by all persons ranging from the wretch that suffers from the barest physical disease to the sinner whose imperfection may be in the subtle spheres of spiritual existence and whose remedy may not be found in physical, mental or moral effect of any kind. Its methods commence from the grossest physical applications of the elements like earth, water, etc., and include the transmission of personal subtle power in its several forms of hypnotism, animal magnetism, auto suggestion, etc., and culminate in the final processes of spiritual resignation, selfsurrender, etc., wherein the individual realises his real oneness with the universal, and, coming into immediate contact, therewith, is immediately purified and beautified in all planes of his being as if by the magic touch of the Divine Hand. In the above description of this comprehensive, indigenous system, we have had to use many terms and phrases of modern currency, being the results of modern scientific advancement and relating to different systems and sub-systems of therapeutics now popular all over the world. But by this it is not to be understood that our indigenous, yet supremely transcendental, yogic system is either a copy or a disguised off-spring of the western things. There is irrefutable evidence of its existence for ages, and of its having once been so very wide-spread and popular and so very ably and efficiently handled to perfection by servants whose powers indeed stagger both our reason and our imagination. The whole of that science is not to be had now, ready made, from any source or in any form, but is to be picked up piecemeal and scattered. At times, we do not even know where to look for information on particular points. But there are grounds for an unshakeable convication for the faith that research will not be in vain but will be met with a reward that may possibly be a revelation of a vast store of hidden wisdom that may indeed be for the permanent blessing of the whole humanity. What we have yet discovered by modern science seems only to suggest and stimulate deeper scrutiny into Nature, and makes the way rather easier by serving as a key for the interpretation of ideas, terms, processes and practices that would otherwise have remained merely occult and enigmatic and of absolutely no practical good. Thus convinced and thus equipped, we have made bold to start the Indian Naturopathic Association which has for over 13 years been working continuously, making such progress as it could and rendering such service as opportunity permitted. We are glad to say that unlike in your country the atmosphere and environment over here is not only not antagonistic, but in a sense quite receptive, sympathetic and helpful to some extent. We have not the prodigious opposition of the Law or of any powerful vested interest, because, as I have stated above, the vested interests being several and divided among themselves, each claiming the support of the public as being indigenous or of the Government as being legalised, none of them could individually dream of a Monopoly of the field nor all of them could combine for any purpose. The foreign Government could not, in the face of the popular support for the indigenous systems, think of creating a monopoly for its own legalised foreign system, although at best it could only extend and restrict its patronage to that alone and thus help the exotic system that was brought in by it. Of course, the other question of creating a monopoly for either of the indigenous systems against its own exotic introduction, is clearly out of consideration. The result has thus been a policy of absolute neutrality on the part of the state, giving scope for unlimited medical freedom on the part of both the patient and the practitioner. Of course medical registration obtains over here so far as Allopathy and, recently to some extent, Ayurveda, are concerned, but this operates only to certify and recommend to the public the duly qualified, professional man but in no way to bar or penalise other people from practising medicine. It need not be said that, under such circumstances, even Naturopathy has a free, fair and open field of unlimited scope and promise ; success depending only upon the results achieved in open comparison and sometimes in competition with those of other systems with unusual success. The fact that Naturopathy is not at all a foreign system to India, although some of its modern applications as brought over from America and Europe are indeed new to the people, and the fact that the life of the people is most simple and their diet, particularly of the poorer classes, generally vegetarian ; these have helped the propagation of the system a great deal. But it has to be said that, on account of the inherent proverty of the people, we could not go in for the costlier and complicated system of Naturopathy ; but have had to content ourselves with the simple methods of Hydropathy, Chromopathy, dietology, physical culture, fasting and the like ; and these have indeed done wonders. Our method of work has been a mission of teaching the public in methods of self-treatment with occasional resort to professional advice in difficult conditions. Wo could not yet organise and strengthen the profession itself by providing technical and scientific equipment of a high character, and thus make it a lucrative one attracting many people having an aspiration in that direction. This has yet to be done. Want of funds on the one hand to handle the costly courses, and the absence of opposition from doctors of other systems thus enabling us to dispense with high technical efficiency and fighting power of the Naturopaths as a professional body, as also the self-treatment possible without running serious risks in treatments under the aforesaid simple systems, have obviated for us an immediate problem for the strengthening of the profession. We are not blind to the fact that, although the simple systems that are already in vogue here are enough to meet the present needs of the people, yet the vast edifice of Naturopathic knowledge built up by the wonderful researches till now made in the west is a blessed acquisition for all humanity, which it shall be our undoubted duty to bring into this country in all its fulness, and give it to the people ; but we have to abide till certain other preliminaries are complete and a full fledged College is brought into existence with the necessary appendages of laboratory, clinic, library and staff. The present college at Calcutta, started with moderate aspirations and planned to meet the immediate requirements of the people, is providing instruction and practical training only in the above mentioned simple methods. The "Indian Naturopath," the association's journal, was formerly started in 1926 ; but was shortly afterwards amalgamated with the "Nature Healer" of Calcutta which also happened to be brought into existence at the same time by the late Mr. R. C. Chatterjee, who was one of our able and esteemed colleagues. After a period of nearly 6 years, we found it desirable to run the two journals separately, partly because the Naturopathic reading public has indeed vastly increased in numbers during the meantime and partly because it was generally felt by the members of the Indian Naturopathic Association that it should publish its own official organ with greater propriety, utility and responsibility. For this reason, the Indian Naturopath is being published separately and we soon hope to bring it up to reasonable dimensions both in quality and quantity. I shall from day to day be in eager expectaion of that eventful day when India shall have the previlege of welcoming on its shores the one gentleman in the world who, by his colossal and world renowned efforts and sacrifices, has earned the right to represent to the ancient East all that Naturopathy in the West is and means to be, and thus lay the foundation for the new era wherein the East and the West may co-operate for the sacred cause.

HOW TO LIVE HEALTHY.

Have fresh air where you live and work. Remember that it is not out of doors we take cold as often as indoors.

Keep the extremities warm, but wear loose, porous clothing that does not exclude all air.

Get out of doors for a part of each day. You might save gasoline by walking to work. According to evolutionists, the next generation may be minus legs if this one uses them only to dance with.

Open the windows of your sleeping room wide, or else sleep on a porch.

Eat a good variety of food, including free use of vegetables and fruits.

See that the child has plenty of milk. It is a protective food insuring needed material for growth.

Do not eat too much, too fast, or between meals.

See that the bowels are normally active, using laxative foods or other simple means.

Stand, sit, and walk erect. You should carry your chest in front of you instead of behind.

Avoid poisonous drugs, either as foods, drinks, medicines, or petty vices.

Bathe frequently; a daily bath or sponge is a distinct advantage. Wash hands before each meal, and teeth following each meal.

Go to your Naturopathic Physician for a health examination once a year. It won't cost you very much and you may save ten dollars to each one you spend. Funerals are expensive.

Remember that play and rest are as essential as work. Try to make your work play, but never let your play become work.

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Glory of Ayurved

ITS STRIKING ACHIEVEMENTS IN THE PAST

ITS BEARING ON MODERN SCIENCE

Mahamahopadhyaya Gananath Sen's Address at Patna Govt. Ayurved Convocation.

Mahamahopadhyaya Gananath Sen Saraswati, M.A., L.M.S. of Calcutta in course of his address at the B. and O. Govt. Ayurvedic Convocation held at Patna said :—

WHAT IS AYURVEDA ?

"At the outset I wish to point out that Ayurveda is not confined within the ringtence of the practice of medicine alone as one finds it at the present day. It is not merely the art of treatment of chronic diseases as current Ayurvedic practice would lead one to suppose. The great Rishis who originated this "Science and Art of living a happy long life" (as they described it) never conceived that Ayurveda would shrink into such narrow scope. History testifies that for thousands of years past Ayurveda was the only systematic healing art not merely of India but of the whole world. Divided into eight branches, *viz.*, medicine, surgery and midwifery, treatment of the diseases of eye, ear, nose and throat, psychotherapy, pediatrics and the science and art of rejuvenation and procreative invigoration, Ayurveda had her specialists and voluminous literature in every branch of practice just as we now have them in western medicine. Of these there are evidence, intrinsic. Fortunately the kernel of all this literature is still preserved. Above all, Ayurveda excelled in preventive medicine which the ancient sages considered the first and foremost object of medicine.

Says Sushruta, "The first object of Ayurveda is the preservation of health. Second comes the eradication of diseases". Even at the present day preventive medicine is coming more and more into importance. Happy would be the day when cure of diseases would be the second object of the Science of modern medicine !

A GLIMPSE OF PAST HISTORY

In ages long forgotten, say during the great war of Mahabharat which occurred at least five thousand years ago, Ayurveda was in vigorous youth capable of effectively meeting all demands upon it, medical and surgical. This was proved in the great war that ruined India. For many a long century after this the light of Ayurveda shone upon all contemporary civilisation as Egypt and Arabia, Rome and Greece, China and Western Asia. Ayurveda was then learnt, adored, followed and imitated in every country. The history of India as taught in our schools is only the history of India's decline. The glories of past India are to be chronicled yet by the modern historian. To us Indians, Mahabharat is the great history which yet reveals the glory of India in ancient times. From the invasion of India by the Greeks which occurred early in the 4th century before Christ, kingdoms crumbled and literary progress came naturally to a standstill. Arson and incendiarism destroyed the wealth and literature of India in no small measure. Internal dissensions born of the lust for extending kingdoms were responsible for the loss of huge libraries of yore just as the great library of Belgium was lost in the recent German War. The riches of India attracted numerous formidable invaders—the Greeks, the Scythians, the Huns and the Saracens. No wonder India lost so much of her literary treasure in these strifes. The wonder is that India has yet retained so much despite so many vicissitudes. Whilst Egypt survives in her mummies and pyramids and Rome in her ruined pillars, India survives in her literature.

PAST GLORY

Great and striking were the past achievements of Ayurveda. In Anatomy, many works on Anatomy like Bhojasanhita Sharir existed and dissection was absolutely compulsory. Sushruta mentions this clearly. The relics of Anatomy still existing have helped me considerably in writing a complete work on Anatomy in Sanskrit. In the field of physiology the fact of the circulation of blood was discovered thousands of years ago, long long before Sir William Harvey sprung a surprise on Europe by stating his theory. We read in Home's History of England that only about a hundred years ago "no doctor above the age of forty could be pursuaded to believe in the impossible suggestion" of Harvey who was condemned and hooted out of society and practice for his absurd discovery! The theory of 'Tridosh' or three principles was also a great finding of the sages of old which still helps us in the physiological, pathological and therapeutical fields in our everyday practice. Modern endocrinology which is yet in its infancy is no doubt driving to the same goal. It is probable that at no distant date it will rise to the height of a light-house to guide the leviathan ship of western medicine in a different course. The 'theory of humours' as found in Greek medicine is only a distorted form of the theory of Tridosh. I am quite convinced that the Ayurvedic theory can be proved and verified in many ways. The advances made in chemistry by a class of Rasavaidyas or chemist physicians who flourished most in the early Christian eras were no less remarkable. When we consider the remote age in which these advances were made we must bow to the wisdom and spirit of research which characterised their work. In Biology, the discovery of the sensibility of plants was made by the ancients even in the time of Mahabharat which gives very good reasons to prove the existence of the five senses in plants just as they are in animals. India's great savant Sir J. C. Bose has illumined the world by proving this theory with original experiments which give visible demonstrations. A regular Symptomatology and treatment of plant diseases still exists in Sharangadhara's work on "Vriksha Ayurveda" and "Agnipurana." In the field of Materia Medica and Pharmacy the properties of drugs and food-stuffs were investigated minutely and a correct insight into them can be yet gained by a close study of the Ayurvedic point of view. Unfortunately the Ayurvedic terminology which describes these properties and Therapeutical effects has remained a sealed book to our western colleagues. The wonderful combination of drugs and the incorporation of their extracts in ghee, oil, syrups etc. exemplified in the Ayurvedic Pharmacopoia have produced recipes which are still highly potent remedies giving charming effects on our patients. The wonderful formulae of various compounds of the metals such as mercury, iron, copper, gold, zinc, tin and other minerals are still the sheet-anchors of Ayurvedic practitioners. Worthy physicians like the late Sir Pardey Lukis and Col. J. T. Calvert, I.M.S. have expressed wonder and satisfaction, on watching the therapeutic effects of these medicines. Modern Pharmacology cannot explain their action. To take one instance : "Makaradhwaja", the safest mercurial preparation which has attracted the attention not only of doctors of western medicine in India but also of Europe, still remains a therapeutic mystery and wonder. Many foreign drugs like Rhubarb, opium and chouchini etc. were used in the Ayurvedic Materia Medica written by Bhava Misra even so late as in the 17th century A. D. That shows Ayurveda was not so stagnant and hide-bound as it is at present even three hundred years ago.

It is noteworthy that even Bacteriology and Microscopic Entomology are foreshadowed very clearly in the writings of Sushruta and Charak.

SURGERY IN ANCIENT TIMES

Those who are apt to judge Ayurveda by its present decayed condition would be surprised to hear that even in the field of surgery the progress made in those early times was wonderful. Major operations like amputations, Laparotomy (*i.e.* opening the abdomen for instestinal obstruction and other troubles), Lithotomy (or extraction of stone) and even triphining of the skull were devised and practised by our old sages. The excellent classification and description of the surgical instruments under different heads as found in Sushruta and Vagbhata compel the admiration of those who take pains to study them with care. There can be little doubt that the old Greek and Roman surgical instruments that are found preserved in the Museum of Naples were only the replicas of Hindu instruments yet found accurately described in texts at least two thousand years old. As early as 1914 I demonstrated before the 5th All-India Ayurvedic Conference presided over by Lt. Col. Kirtikar, I. M. S. that ninety per cent. of the modern surgical instruments are still found described accurately in Sushruta and Vagbhata. In Obstetrics, the different mal-positions of the foetus at birth were clearly understood and described by the ancients. Different methods of the treatment of these conditions by version and Embryotomy were practised by them. The operation known as Caeserian section had its origin in the practice of Eastern Surgery. Various plastic operations on the nose, ears and lips are still to be found described in Sushruta, and one of them is still mentioned as "Indian method" in Western Surgery. Last though not least are the two specialised branches of Ayurveda known as Rashayana and Vajeekarana. The main object of the first was the restoration of health and failing powers in old age which many of us would no doubt keenly desire. In the west this subject has sprung into importance very recently and occupies a special field of research. The main object of the second branch is the preservation and restoration of procreative power so as to get healthy progeny, the necessity for which is now being faintly realised in the west. The Unani system took up the subject long ago and perhaps excelled in its practice during the last few centuries.

Many lost limbs of Ayurveda are still traceable in the Unani system. She was once highly vigorous and is again striving to be so. To the exponents of that system I appeal to give us the hand of generous co-operation, not the fist of hostile rivalry.

Out of the Unani system within the past few centuries there arose a radiant child now known as Modern Medicine. Under the fostering care of the new western civilization and state patronage this child has been growing fast and is now spreading her lustre all over the world. She has developed wonderfully and has almost forgotten the debts she owes to Ayurveda.

RECENT PROGRESS

But in India, the cradle of the Healing Art, a new offspring of Ayurveda is growing steadily though slowly and poorly as a neglected child. This poor but ambitious child is Modern Ayurveda as we understand it Fortunately our rulers have understood their responsibility in this matter and have extended the hand of patronage to the growing spirit for the restoration and development of Ayurveda. General and progressive standard of Ayurvedic education have now been laid down and are being steadily worked out by the All-India Ayurveda Vidyapitha, the standing academic Council of the All-India Ayurvedic conference which holds its examinations annualy in over 20 centres of India. The Benares Hindu University has followed suit and has now a splendid Ayurvedic College and hospital where training is given for six years to produce Ayurvedic graduates of real merit.

STATE AID TO AYURVEDA.

Thanks to the liberal munificence of the Governments of different provinces of India (except alas of Bengal) and to the patronage of the Ruling Princes, we have now the Government School of Indian Medicine in Madras, the Government Ayurvedic School in Patna, the Universty Ayurvedic College in Benares, the Ayurdedic College at Hardwar, the Mysore Ayurvedic College, the Ayurvedic College of Travancore and other Ayurvedic schools and colleges and Charitable Institutions all over India. Advisedly I do not mention in this list such worthy institutions as the Dayanand Ayurvedic College of Lahore, Prabhuram Ayurvedic College and Pandit Jadavjee Ayurvedic Pathsala of Bomby, Tilak Mahavidyalaya Ayurvedic Pathsala of Poona, Ayurvedic and Tibbi College of Delhi and other Ayurvedic Institutions of Northern and Western India as they are mainly or entirely supported by the public. In Calcutta fortunately we have four Ayurvedic Colleges and Hospitals now, viz., the Ashtanga Ayurveda Vidyalaya, Vaidya Shastrapitha, Govindasundari Free Ayurvedic College and the Viswanath Ayurveda Mahavidyalaya which came into being one after another in the order mentioned, thanks to the substantial donations and sacrifices of their founders. Fortunately the hospitals attached to these Institutions (excepting that of the last new institution which has just applied for a grant) are liberally supported with funds furnished by the Calcutta Corporation. But the Government of Bengal has not stirred a finger yet to help them.

IN MADRAS AND U. P.

It is gratifying to note in this connetcion that the Government of Madras has spent about Five Lacs for the building and progress of the Government Ayurvedic School in Madras and is spending over sixty thousand a year now for its maintenance. So far as I know the state of Ayurvedic practitioners passing out of this

Institution has been raised in that province to the grades of Assistant Surgeons and Sub-Assisant Surgeons according to the different degrees conferred. There the Government has been liberal to appoint these physicians in Government services also. In the United Provinces, the Government has been spending the annual sum of one lac and seventy-five thousand for the sake of Indian Medicine. Of the amount, the Hindu University Ayurvedic College receives Rs. 50,000, the Hardwar Ayurvedic College receives Rs. 10,000 from year to year and Rs. 60,000 is given annually to the Ayuvedic Charitable Dispensaries of the Province. The Unani College of Aligarh University and Unani Charitable dispensaries receive about Rs. 50,000 annually. There is also a Board of Indian Medicine maintained at Government cost which prescribes courses, distributes the grant and is now preparing to introduce Registration at an early date. These are facts which I have gathered rather carefully and I do hope and trust that the Governments of other Provinces will follow the noble example shown by the Government of Madras and United Provinces

IN BENGAL.

As far back as 1920, the Government of Bengal appointed an Ayurvedic Committee which worked faithfully and produced a report recommending the opening of a central Ayurvedic college and several Ayurvedic schools with hospitals attached to them. It also recommended the establishment of a general council of registration and a State Faculty of Ayurveda. The Government of Bengal took only a lukewarm interest in the subject and frequent changes of ministry further interfered with the progress of the scheme. On our pressing the matter repeatedly before the Government, it was at last decided that the General Council and State Faculty only would be established at present. For this I was asked to draft the statutes in collaboration with an ex-Vice-chancellor of our University and an eminent medical man which were examined by the Ministers and approved of after some amendments by a conference of learned Kavirajes, officially called for the purpose. But for want of funds, we are told, though a few thousands only were required to start the Council and Faculty (which would have paid their own way), this scheme has been put aside in cold storage.

THE PATNA SCHOOL.

I therefore congratulate the people and Government of Bihar and Orissa for their achievement. So far it is small but I am confident a good deal more would be forthcoming at no distant date.

NEED FOR STATE FACULTY.

I should like to stress the necessity for a General Council of registration and a State Faculty of Ayurveda in your province. Here there is a great anomaly in the matter of giving diplomas and titles in Ayurveda. You have the Sanskrit Association of Bihar and Orissa giving easy diplomas in Ayurveda along with diplomas in subjects like literature, grammar and philosophy. I need hardly point out that Ayurveda is not merely a theoretical subject. Practical training in all subjects is indispensable in every branch of Ayurveda. It is therefore not fair and equitable to give the same degree or diploma to those who learn merely from some books as to those who earn the diploma by the sweat of their brow here after five years of close study and practical training. This state of things can be remedied only by establishing the Council State Facully which would fix the standards of study and examine the students of Ayurveda—those who study in tols should be given a supplementary training in this school to qualify themselves for the diploma. We want to carry succour to the suffering people—for which a large number of qualified men—not quacks—are necessary. So we want to regularise the practice of Ayurveda in the right spirit. Quackery should be prevented by all means, by registration—by control of examinations—for half-boiled quacks are not less dangerous than ignorant quacks. Practical training is essential.

Original Articles

YAKSHMA OR TUBERCULOSIS IN AYURVEDA

BY

KAVIRAJ A. C. KAVIRATNA

Calcutta.

(*Continued from our January issue*)

Prakshepartha :—

Pulv. Black Pepper	...	4 Tolas
„ Cinnamon	...	„
„ Elaich (Large Cardamom)	...	„
„ Tejpatra (Cinnamum Tamella)	...	„
„ Nageswar (Cobras saffron)	...	„

After preparation, when it cools down add honey 2 seers.

The Ghreeta thus prepared is of marvellous efficacy and is properly called Amrita, 'Necter.' It acts as a charm in suitable doses in cough, asthma, hiccough, hæmoptysis, hysteria, palpitation of heart, sterility, urinary and ovarian diseases. Amritaprova Ghreeta is a first class alterative tonic and could safely be used to all lean and thin persons to put them on flesh and strength.

Recipes of Vasa Chandanadi Oil.

चन्दनं रेणुका पूतिर्हयगन्धा प्रसारणी ।
त्रिसुगन्धि कणामूलं नागकेशरमेव च ॥
मेदे द्वे च त्रिकटुकं रास्ना मधुकशैलजम् ।
शटी कुष्ठं देवदारु वनिता च विभीतकम् ।
एतेषां पलिकैर्भागैः पचेत् तैलाढकं भिषक ॥
बासायाश्च पलशतं जलद्रोणे विपाचयेत ।
लाचारसाढकश्चैव तथैव दधिमस्तुकम्
चन्दनञ्चामृता भार्गी दशमूलं निदिग्धिका
एतेषां विंशतिपलं जलद्रोणे विपाचयेत्
पादशेषे स्थिते क्वाथे तैलं तेनैव साधयेत्

कासान् ज्वरान् रक्तपित्तं पाण्डुरोगं हलीमकम् ।
कामलाञ्च क्षतक्षीणं राजयक्ष्माणमेव च ॥
श्वासान पञ्चविधान् हन्ति वलवर्णाग्निपुष्टिकृत् ।
तैलं वासाचन्दनादि कृष्णात्रेयेण भाषितम् ॥

Til Taila (Sesamum oil)	...	16 seers

Kawthartha :—

Vasaka Bark (Adhatoda Vasaka)	...	12½ seers
Water	...	64 seers
Reduce to	...	16 seers
Red Sandal Wood (Peterocarpus Santalins)	...	20 palas
Sat Gila (Tenaspora cordifolia)	...	,,
Bamunhati (clerodendron siponanthus)	...	,,
Dashamula	...	,,
Kantakari (Solanum janthocurpum)	...	20 tolas
Water	...	64 seers
Reduce to	...	16 seers
Decoction of Laksha (Coccus Lacca)	...	16 seers
Milk Curd	...	16 seers

Kalkartha :—

Red Sandal Wood (Peterocarpus Santalinas)		1 Pal
Renuka (Piper Aurantiacum)	...	,,
Khatasi (Viverrocivet)	...	,,
Aswagandha (Wightania Somnifera)	...	,,
Prosarani (Paederiafœtida)	...	,,
Cinamon (Amomum Subulatum)	...	,,
Elachi	...	,,
Tejpatra (Cinnamum Tamella)	...	,,
Long Pepper Root	...	,,
Nageswar (Cobras saffron)	...	,,
Meda (Gymnema Aurantiacum)	...	,,
Mohameda (Leptadenia Safartum)	...	,,
Trikatu	...	,,
Rasna (Vanda Roxburghi)	...	,,
Jaistamadhu (Liquorice Root)	...	,,
Sailaj (Aspecies of Lichen)	...	,,
Shoti (Curcuma Zerumbet)	...	,,
Kur (Sansurea Auriculata)	...	,,
Debdaru (Pinus Devdara)	...	,,
Priangu (Aglacea Ruxburghianna)	...	,,
Boyerah (Terminalia Belirica)	...	,,

Oil thus prepared is used as massage to stimulate the action of lungs and their inflammation. It is also useful in Asthma, Cough, haemoptysis and in Phthisis.

Recipes of Chandanadya Oil.

Til Taila 8 seers

Kathartha :—

White Sandal Wood (Santalum Album)	... 1 pal
Aguru (Fragrant wood)	... „
Talispatra (Abies webbiana)	... „
Nakhi (Shell)	... „
Manjista (Rubia cardifolia)	... „
Padmakastha (Prunus Padam)	... „
Mulathi (Cyperus Rotundum)	... „
Shoti (Culcuma Zerumbet)	... „
Laksha (Coccus Lacca)	... „
Turmeric	... „
Red Sandal Wood (Peterocarpus Santalina)	„

Kalkartha :—

Bamunhati (Clerodendron Siponanthus)	... 2½ seers
Vasaka Bark (Adhatoda vesica)	... „
Kantakari (Solamum Janthocurpum)	... „
Berela (Sida Cordifolia)	... „
Guduchi (Tinospora cordifolia)	
Aqua	... 64 seers

Reduced to 16 seers.

Gandhartha :—

Shilarasa (Liquid Ambar)	... 2 tolas
Kunkuma (saffron)	... „
Nakhi (Shell)	... „
White Sandal Wood (Santalum Album)	... „
Karpoora (Camphor)	... „
Elaich (Amonum Subulatum)	... „
Cloves	... „

Oil thus prepared is externally used as massage to strengthen the muscles and accelerate the act of circulation of the parts.

Recipes of Chyabanapras Avaleha.

विल्वाग्निमन्थश्योनाक-काश्मर्य्यः पाटला बला
पर्ण्यश्चतस्रः पिप्पल्यः श्वदंष्ट्रा बृहतीद्वयम् ॥

शृङ्गी तामलकी द्राक्षाजीवन्ती पुष्करागुरु
अभया चामृता ऋद्धिर्जीवकर्षभाकौ शटी
मुस्तं पुनर्नवा मेदा सूक्ष्मैलोत्पलचन्दने।
विदारी वृषमूलानि काकोली काकनासीका
एषां पलोन्मितान भागाञ्छतान्यामलकस्य च।
पञ्च दद्यात् तदैकध्यं जलद्रोणे विपाचयेत्
ज्ञात्वा गतरसान्येतान्यौषधान्यथ तं रसम !
तच्चामलकमुद्धृत्य निष्कुलं तैलसर्पिषो:
पलद्वादशके भृष्ट्वा दत्त्वा चार्द्धतुलां भिषक्
मत्स्यण्डिकाया: पूताया लेहवत् साधु साधयेत्
षट्पलं मधुनश्चात्र सिद्धशीते प्रदापयेत्
तचु: पलं तुगाक्षीर्य्या पिप्पल्या द्विपलं तथा
पलमेकं विदध्याच्च त्वगेलापत्रकेशरात्
इत्ययं च्यवनप्राश: परमुक्तो रसायन:।
कासश्वासहरश्चैव विशेषेणोपदिश्यते।
क्षीणक्षतानां वृद्धानां बालानाञ्चाङ्गवर्द्धन:॥
स्वरक्षयमुरोरोगं हृद्रोगं वातशोणितम्
पिपासां मूत्रशुक्रस्थान् दोषांश्चैवापकर्षति
अस्य मात्रां प्रयुञ्जीत योपरुन्ध्यान्न भोजनम्
अस्य प्रयोगाच्च्यवन: सुवृद्धोऽभूत् पुनर्युवा॥

Bark of bael root (Aegle Marmelos)	...	1 pal
Ganiari Bark (Chelonioides)	...	,,
Sona ,, (Bignoi Indica)	...	,,
Gambhari ,, (Gmelina arborica)	...	,,
Parul (Streofermum Suaveoleus Bark)	...	,,
Barela (Sida Cordifolia)	...	,,
Salpani (Deosmodium Gangeticum)	...	,,
Chakule (Hemionites Cordifolia)	...	,,
Mugani (Phaseolus Trilobus)	...	,,
Masani (Teramnus Labialis)	...	,,
Long Pepper (Piper Longum)	...	,,
Bhumi Amla (Phyllanthus niruri)	...	,,
Draksha (Grapes)	...	,,
Jibanti (Dendrobinus)	...	,,
Kur (Sansuria Auriculata)	...	,,
Krishna-Guru (Eagle-Wood)	...	,,
Haritaki (Chebulic Myrobalam)	...	,,
Gulancha (Tinospora Cordifolia)	...	,,

Riddhi	...	1 pal
Jivaka (Pentaptera Tomentosa)	...	,,
Rishava (Carpopogon Pruriens)	...	,,
Shoti (Curcuma Zerumbet)	...	,,
Mutha (Cyperus Rotundum)	...	,,
Punarnava (Hogweed)	...	,,
Meda (Gemnema Aurantiacum)	...	,,
Small Elachi (Elettaria Cardamomum)	...	,,
Nilotpala (Nymphæa stellata)	...	,,
Red Sandal wood (Peterocarpus Santalinas)	...	,,
Bhumi Kusmanda (Ipomoea digitata)	...	,,
Vasaka root (Adhatoda Vasaka)	...	,,
Kakoli (Gymdema Balvamicum)	...	,,
Kakjangha (Lecahirta)	...	,,
Amlaki (Chebulic Myrobalam) 500	...	$7\frac{3}{4}$ seers
Aqua	...	64 seers
Reduce to	...	16 seers

The decoction should be strained through a linen and Amla should be made into a paste. The paste of Amlaki should be fried in 24 Tolas of Clarified butter and 24 tolas of Til Oil to perfection, when the decoction should be added to the fried mass and stirred gently over the fire till the same is coagulated to a paste like substance when the following pulverized ingredients should be added and mixed well, taking out the pan from over the oven.

Palm sugar candy	50 pals
Bansalochana (Manna of Bamboo)	4 ,,
Long Pepper (Piper Longum)	2 ,,
Cinnamon	2 tolas
Tejpatra (Folia Malabathy)	,,
Elaich (Amomum Subulatum)	,,
Nageswara (Cobras Saffron)	,,

Then add when the mass is cool 6 palls of honey.

Chyabanaprash thus prepared should be administered with goat's milk and sugar candy to taste in doses of 1 to 2 tolas to adults. It is indicated in hoarseness of voice, cough, weakness of lungs, asthma, bronchitis, consumption, phthisis, general weakness and to those who suffer from habitual cold at the change of season. It is also prescribed to put the thin persons into flesh and in the clinical test it has been found to give decidedly better result in cases where Cod Liver oil was advised by the allopaths.

Recipos of Drakskarista are as under :—

Pakartha :—

Draksha (Grapes)	6¼ seers
Aqua	128 seers
Redued to	32 seers
Treacle	25 seers

Kalkartha :—

Cinnamon	8 Tolas
Elachi (Amomum Subulatum)	8 tolas
Tejpatra—(Folia Malabathy)	do
Nageswar—(Mesuaferrea)	do
Priangoo—(Aglacia Roxburghianna)	do
Black Pepper—(Piper Nigrum)	
Long pepper—(Piper Longum)	do
Viranga—(Embelia Ribes)	do

Stir the Kalkartha ingredients with the decoction in a Jar preferably in a jar in which ghee is kept and cover the mouth of the jar nicely with clay plaster and allow the contents to ramain there for 30 days. Then strain the decoction through a linen for medicinal use. It is efficacious in consumption, cough, asthma, and in diseases of throat and lungs in general, having a stimulating action on the mucous membrane and tissues. It is a useful tonic and improves peristolic action of the bowels.

DIET.

Diets that should be allowed according to Ayurveda could be understood from the following Sanskrit verses :—

मद्यानि जाङ्गलं पक्षिमृगमासं विशुष्यताम् ।
मुद्गयष्टिकगोधूम—यवशाल्यादयो हिताः ॥
दोषाधिकस्य बलिनो मृदुशुद्धिरादौ ।
गोधुममुद्गचणकारुणशालयश्च ॥
छागादि-मांस् नवनीतपयोघृतानि ।
क्रव्यादमांसमपि जाङ्गलजा रसाश्च ।
पक्वानि मोचपनसाम्रफलानि धात्री ॥
खर्ज्जुर-पौष्कर-परूषकनारिकेलम् ।
शोभाञ्जनञ्च कुलकं नवतालशस्यं ॥
द्राक्षाफलानि मिषयोऽपि च मानिमन्थम् ।
सिंहास्यपत्रमपि गोमहिषीघृतञ्च
छागाश्वयाश्च तद्वस्करमूत्रलेपः

मत्स्यण्डिका शिखरिणी मदिरा रसाला
कर्पूरकं मृगमदः सितचन्दनञ्च ॥
अभ्यञ्जनानि सुरभीण्यनुलेपनानि
स्नानानि वेशरचनान्यवगाहनानि ॥
हर्म्यं स्रजं स्मरकथा मृदुगन्धवाहो
गीतानि लास्यमपि चन्द्ररूचो विपञ्ची
मुक्तामनि प्रचुरभूषणधारणञ्च
होमः प्रदानममरद्विजपूजनानि ॥

Wine, the flesh of wild birds, deer, mugdal, Oat, Barley and *Shali* rice are considered good diet for a phthisical patient. For strong persons, administration of emetic drugs are useful. Meat, milk, butter, Ghee of goat as well as meat of Carnivorous animals and raw meat juice of Jungal birds are highly efficacious dietary for consumption. The flower of plantain, ripe Jack fruit, ripe Mangoe, Amlaki, Dates, Pushkara root, Puru fruit, Cocoanut Karnel, Sajina (moringa) leaves, *Palta* (leaves of Patal), soft Karnel of palm fruit, Grapes, Cumin seed, Rock salt, Vasaka leaves, clarified butter of cow or Buffalow, use of camphor, musk, white sandal wood paste and scents are very favourable and their use should be insisted upon by the consumptives.

Massage of oil and full bath should not be restricted.

The patient should be advised to remain in a very decent house, to dress himself elegantly, breathe gentle free air, listen to melodious songs, attend to social dances, and to hear the sweet sounds of musical instruments so that his mind may be diverted and chearfulness of his spirit maintained. He should also be instructed to mark the beautiful natural phenomena and to walk in moon light in the night and to walk with his body exposed in the sun in the day to have sufficient sun-rays on his body.

Further, the patient should be insisted upon to keep company with a he-goat when he goes to sleep and to paint his body with the dung and urine of goat at least once a day ; the painting should be allowed to remain on the body for some time and dried up in the sun, body being exposed fully to the rays of the sun. Fresh dry air, abundant sun light and sea voyage are advantageous. Dry and non-changeable climate is preferable to the consumptives. Observance of the foregoing instructions would be of immence help in the treatment of Phthisis and of considerable benefit to the patient.

Restrictions :—

शोकं स्त्रियं क्रोधमसूयताञ्च
त्यजेदुदारान् विषयान् भजेच्च
तथा द्विजातींस्त्रिदशान् गुरूंश्च
वाचश्च पुण्याः शृणुयाद् द्विजेभ्यः ॥

The consumptive must be free from all worries, anger and abstain from sexual intercourse. He should culture his mind spiritually and be respectful to his superiors and religion and at the same time he should make it a point to attend to the religious hymns chanted by the Brahmins from religious books like Srimat Bhagbat Gheeta which are generally read out in a peculiar voice which induces men to be absorbed in rapt attention and carries them far away from the earthly attachment during the recitation of the verses. This gives a considerable help and good impression on the mind which is necessary for eradication of the disease from the system.

The following Sanskrit verse enjoins upon the restrictions that are to be observed in respect of dietary in galloping phthisis (Rajayaksha) :—

विरेचनं वेग-विधारणानि
श्रमं स्त्रियं स्वेदनमञ्जनञ्च
प्रजागरं साहसकर्म्मसेवा
रूक्षान्नपानं विषमासनञ्च
ताम्बुलकालिङ्गकुलत्थमाषरसोनवंशाङ्कुररामठानि
अम्लानि तिक्तानि कषायकानि कटूनि सर्व्वानि च पत्रशाकम्
क्षारान् विरुद्धान्यशनानि शिम्बीं
कर्कोटकञ्चापि विदाहि सर्व्वम्
कठिल्लकं क्षणमपि चयेषु
विवर्ज्जयेत् सन्ततमप्रमत्तः ॥

The phthisical patient should not disregard the calls of nature such as vomiting, passing of urine and fæces. He must not cohabit with a female or use cosmetic on eyes, apply hot fomentation, keep up night, indulge in heroic deeds, eat any dry or perched foods which are indigestible. He should be warned against taking any food which is contradictory to others, such as, milk before and after meat or curd, etc. Betel, garlic, Bamboo *Kowra*, Assafotida, acid, bitter, pungent, alkaline foods, greens, sheem, Kankrole, Black occimum sanctum are injurious to consumptives and must be restricted.

The phthisical patients are advised to abandon Brinjal, Kakrol, Oil, Bael, Mustard, sexual relation, sleep in day time and anger as per injunction of Ayurveda vide cuplet quoted below:—

"वृन्ताकं कारवेल्लञ्च तैलं बिल्वञ्च राजिकाम्
मैथुनञ्च दिवानिद्रां क्षयी कोपं विवर्ज्जयेत् ॥"

THE PANCREAS

BY

WILHELMINA POLLARD.

Perhaps of all the glands in the human system, the least familiar to the layman is the Pancreas, and yet it is most vital to the process of digestion, without which it would be impossible to live. When the digestive process is impaired and the physician is consulted, one hears vague murmurs concerning the different enzymes, pancreatic juice, insulin, diabetes melitus, but very seldom does the patient know what it is all about.

The Pancreas is a compound racemose gland which lies in front of the first and second lumbar vertebrae and behind the stomach. It weighs approximately from two to three ounces, is about five inches long and two inches wide. In form, it somewhat resembles a hammer and is divided into a head, body and tail. The right end or that part which is designated the head, is somewhat thicker and fills the curve of the duodenum (the first part of the small intestine), to which it is firmly attached. The left portion or the tail reaches to the spleen.

A racemose gland under which the Pancreas is classed, is a gland which resembles a bunch of grapes. In other words, it is composed of lobules. Each lobule consists of one or more branches of the main or pancreatic duct and are joined together by connective tissue to form lobes which, in turn, are united in the same manner to form the gland or pancreas. Small ducts from each lobule open into the pancreatic duct which runs lengthwise through the entire gland. This pancreatic duct, sometimes called the duct of Wirsung, and the common bile duct from the gall bladder usually unite and enter a common opening into the duodenum at about three inches below the pylorus (the opening of the stomach into the duodenum).

A special group of cells, known as the Island of Langerhans, are scattered throughout the Pancreas, the function of which is to furnish the internal secretion of this gland, and these cells mean much in the utilization of sugar in the body from the blood.

The functions of the Pancreas are two-fold and of the greatest importance to digestion. This gland froms two secretions: 1. The external secretion or Pancreatic juice: 2. The internal secretion or Insulin. Pancreatic Juice is a clear, sometimes viscous, fluid with a decided alkaline reaction. It contains three enzymes or ferments: Amylopsin, Trypsinogen and Steapsin. This secretion is poured into the duodenum during intestinal digestion. Amylopsin, like the ptyalin in the saliva, coutinues the digestive process in the small intestine of the starchy foods which have escaped digestion in the mouth and stomach. Trypsinogen joins with the enzyme from the duodenal cells to form Trypsin which furthers the digestion of proteins and Steapsin promotes the digestion of fats which, until now, has been digested but very little, if at all.

The internal sceretion containing the hormone, insulin, which is formed by the Island of Langerhans is that which changes the glucose of the blood into a form that the tissue cells are able to utilize. This fluid is absorbed by the blood and carried to the tissues to act upon glucose. When this secretion is deficient or impaired in any way so as to have no effect on the glucose, the glucose cannot be oxidized or burned within the cells and remains in the blood stream until it is eliminated by the kidneys. This metabolic derangement is the fundamental cause of Diabetes Mellitus and follows the destruction of the Islands of Langerhans.

IMPORT OF PATHOGENIC MICRO-ORGANISMS.

A law is now in force in Siam governing the import of pathogenic micro-organisms, virus, toxins, venoms, etc.

None of these may be imported without a permit, and even if they are brought into Siam merely in transit to another country they must be declared to the Customs authorities. Permits are required also for possession in that country except in the case of vaccines and serums, which have been officially inspected and stamped. Finally, permits are necessary where such goods are used in laboratory work or for teaching purposes. Offences against the law are punishable with imprisonmet not exceeding three years, or a fine not exceeding Ticals 3,000, or both. Its execution is entrusted to the Minister of the Interior.

GYNÆCOLOGY, OBSTETRICS, AND PEDIATRICS OF THE AYURVEDISTS

BY

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(*Continued from our January issue*)

EMBRYOLOGY.

Classification :—

The animated world is divided into :—(1) *Svedaja* (born of sweat or moisture, and heat), *e.g.*, ants, worms, etc. ; (2) *Udbhija* (Vegetable-born), *e.g.*, frogs, etc. ; (3) *Andaja* (egg-born), *e.g.*, birds, snakes, etc. ; (4) *Jarayuja* (placental, vivi-parous, and covered by a membrane or *Jara*), *e.g.*, man and animals (Su.).

Development :—

(A) Development of a Living Being.

Conception is due to the union of 'Semen' (*Virya*) and 'Menstrual Fluid' (Artava) (Ch.). The latter has the properties of Blood (*Rakta*) and is the essential factor which makes impregnation possible (Su.).

'Menstrual Fluid' and 'Semen' dislodged by aggravated *Vayu* and *Agni* (Thermogenic Principle) become confined in the uterus ; the impregnated ovum has thus both cooling and heat generating properties as it partakes of the characters of 'Menstrual Fluid' and 'Semen' (Su.).

The ovum is the result of the entry of the Soul at the time of the union of healthy 'Semen' and 'Menstrual Fluid in a healthy generative organ (Ch.).

He who is known by the epithets 'Self-Conscious,' 'Soul,' etc., then takes hold of the five Subtle Principles contributed by the united 'Semen' and 'Menstrual Fluid,' assumes a subtle shape throughout, and is marked by the three fundamental qualities of *Satva*, *Raja*, and *Tama* ; led away by *Vayu*, it lies confined in the uterus, and evolves into God, animal, or monster (Su.). The Soul entering the ovum in the uterus is invisible ; it assumes various forms according to the parent species of animal ; for, most of the properties of the contributing factors are seen in the ultimate product (Va.).

The combined 'Semen' and 'Menstrual Fluid' in the uterus mixed with the eight Temperaments (*Prakriti*) and its sixteen modifications (*Vikara*, the five Elements and eleven organs) and domineered by the Soul (*Atma*) is called the Foetus; there is consciousness in the embryo. The Vital Force (*Vayu*) divides it into Humours, Root-Principles, Excrements, limbs, and organs; the Fiery Principle (*Teja*) controls the metabolism; the Water Principle (*Apa*) keeps it in a moist state; the Earth Principle (*Prithivi*) gives it a hard shape; the Ether Principle (*Akasha*) contributes to its growth and development; a fully developed foetus with its hands, feet, tongue, nose, ears, buttocks, etc. and the sense organs is called the body (*Shariram*) (Su.).

The five elements (Earth, Water, Fire, Air, and Ether), are present in created beings in their subtle forms, and contribute to the formation of the material body by their molecular adjustment in the way of supplying nutrition and increasing body-weight (Su.).

The fœtus is formed out of the subtle elements (Earth. Water, Fire and Air), obtained from each of the follwing—'Semen' 'Menstrual Fluid,' Food of the mother, and the Soul. The Soul enters at the time of the union of 'Semen' and 'Menstrual Fluid' and gives the foetus an individuality (Ch.).

The foetus is made out of six essentials, *viz.*, the five subtle elements (Earth, Water, Fire, Air, Ether) brought together by Soul Force which takes up in a very short time the five subtle elements one by one and becomes the rudimentary foetus (Ch.).

When the Soul starts procuring for itself a 'Body,' it absorbs the Ether Principle first, and then successively absorbs the four other heavier Elements; this process is completed in a very short time (Ch).

The five elements obtained from the ovum, the second five brought in by the Soul, and the third five obtained from the mother's blood, form the fifteen subtle elements which contribute towards the formation of the tangible body (Va.).

From the subtle *Ether* element are fromed all outlets of the body for impurities, ears and other hollow organs, (*e.g.*, uterus); from the subtle *Air* element (*Vayu*) are formed touch and respiration; from the subtle *Fire* element are formed eyes, complexion, and digestive power; from the subtle *Water* element are formed tongue, Lymph, and secretions; from the subtle *Earth* element are formed the nose, the sense of smell, and bones (Va.).

(1) The *'Semen'* (*i.e.*, the paternal principle) contributes—the hairs of the head and body, beard and moustache, bones, nails, teeth (all the firm and hard substances in the organism of a child), as also veins (*Sira*), nerves and arteries (*Dhamani*), and 'Semen' (Su.).

(2) The *'Menstrual Fluid'* contributes—muscles, blood, fat, marrow, heart, navel, liver, spleen, intestines, anus and all other soft matters in the body ; also—skin, lungs, stomach, upper and lower rectum, kidney, bladder, and the ducts (Ch.). The spleen and liver are formed out of blood ; the lungs are made out of froth of blood ; and the rectum (*Unduk*) out of the refuge matter of blood (Su.).

(3) The Lymph (*Rasa*) contributes—complexion, strength, rotundity, growth, and decay of the body (Su.) ; contentment, energy, and the connection of the foetus with the Vital Breath (*Prana Vayu*), (Ch.) ; origin, growth and balanced metabolism of the body (Va.). The self-conscious Personality is Lymph-born in origin, and is thus dependent on a healthy regimen of diet and conduct ; the Lymph strengthens chiefly all the Root-Principles of the body (Su.).

(4) *The Soul* or spiritual element (*Atma*) contributes the sensual organs, consciousness, knowledge, wisdom, and longevity (Su.). It gives that vital energy which gives life to the ovum and makes it grow into a foetus (Ch.). It gives energy, Birth, and Mind (Va.).

From the Soul, the body obtains birth in a particular genus, knowledge of Self, Mind, Sense-Organs, and Motivity, the five kinds of Vayu, Vital Force, Metabolic Energy, the size and form of the body, Voice, Complexion, Happiness, Misery, Desire, Jealousy, Vitality, Memory, Intelligence, Individuality, and Desire to work (Ch.).

(5) *Satva* contributes to the formation of attributes and character ; the temperaments of persons may be of seven different types, according as the deranged Humours of the body are involved either severally, or in combination of two, or all the three together ; the temperament never changes, nor does it undergo any deterioration ; it originates from the material elements of the body (Su.).

Mind connects the Soul with the body and stimulates the sensory organs to action (Ch.).

(6) *Satmya* (innate physiological characteristics of the parents) contributes valour, strength, glow, healthfulness, and memory (Su.). It gives length of life, health, energy and strength (Va.).

(B) Development of Twins.

When the ovum is divided by *Vayu*, a male or female child results in accordance with the preponderance of male or female element in each of the divisions; if 'Semen' preponderates in both divisions, the result is twin-boys; if 'Menstrual Fluid' preponderates in the divisions, the result is twin-girls; and both the children are of equal weight; un-equal preponderance of either of the substances in each of the divisions causes twin boy and girl (Ch.). These divisions are according to good and evil deeds of the previous Births of the parents (Su.).

If there are many divisions, there are as many children; the variations in sex, size, and strength of the twins, triplets, etc. are due to irregular divisions of the ovum (Ch.).

(C) Differentiations of Sex.

A male issue is the result of preponderance of 'Semen', and a female issue is due to the preponderance of 'Menstrual Fluid (Bhoja). A Hermaphrodite is due to equal quantities of the two (Ch.).

Hermaphrodite :—(a) *Parental Causes.*—It is the result of the parental elements, 'Semen' and 'Menstrual Fluid', being equal in quality and quantity (Bhoja). Eight kinds of sexless or hermaphrodite persons are recognised; they are due either to (1) a union of equal quantities of 'Semen' and 'Menstrual Fluid'; (2) inert 'Semen'; (3) the 'Semen' and 'Menstrual Fluid' being extremely weak; (4) weakness of parents; (5) forced sexual act; (6) great mental distress at the time of the sexual act (Ch.)

(b) *The Foetal Causes* are :—(7) the *Vayu* destroys the sexual power of the fœtus; (8) *Vayu* and Body-heat (*Agni*) destroy the sex-organs of the foetus (Ch.).

Both the antenatal and intranatal causes are the fruit of the good and bad actions of the past lives of the parents (Ch.).

(D) Development of the Placenta, Cord and Tissues.

The orifices of the ducts that carry 'Menstrual Fluid' in the body of an enciente are bloked up by the foetus during pregnancy; the 'Menstrual Fluid' thus obstructed ascends upwards; a part of it accumulates in the uterus and forms placenta (*Apara, Shrivara*) (Su.)

The Umbilical Cord (*Nadi*) is attached to the cavity of the vein in the mother. The cord is called *Amara*, and is joined to the mother's heart. There is membraneous covering (*Jara, Ulba*) round the fœtus (*Su.*, Ch.).

The cord is attached to the navel of the foetus at one end and to the placenta at the other end; the placenta is attached to the mother's heart by ducts (V. Va.).

The Placenta is slimy and spotted; its attachment to the uterus is neither in the flesh, nor in the fat, nor in the marrow (Atharva-Veda).

The fœtus is enveloped by two membraneous (ammion and charion) structures; the fœtus lies under the outer membrane; its smell is putrid; the inner membrane does not injure the fœtus; it is from the inner membrane that 'who is bron' is born; the relative position is successively (1) the body of the mother, (2) the womb, (3) the outer membrane, (4) the inner membrane, (5) the foetus; inside the amniotic cavity is water and this water encloses the offspring; the open part of the membrane is upwards, for it is in this way that the womb bears the foetus; the Umbilical Cord is a triple one; for food is three-fold; moreover, the father and mother are two, and that 'which is born' is a third one; hence the triple cord (Shatapatha-Brahmana).

During development, seven folds or layers are formed, and are deposited on the rapidly transforming impregnated ovum, in the same manner as layers are formed and deposited on the surface of milk; they are called successively (1) *Avabhasini*, (2) *Lohita*, (3) *Shveta*, (4) *Tamra*, (5) *Vedini*, (6) *Rohini*, (7) *Mansadhara*; they measure in all six thicknesses of rice grain; the measurements are with reference to the thickness of the skin over the fleshy part of the body (Su.).

Kalas (Tissues) also number seven; they are situated at the extreme edges of the seven Fundamental Principles (*Dhatu*) of the fœtus; they are supplied with Tissues (*Snayus*) bathed in a secretion and are encased in a membraneous covering. They are :—(1) *Mansadhara* (Supporters of Muscle, Fascia); (2) *Raktadhara* (Supporters of Blood); (3) *Medadhara* (Supporters of Fat); (4) *Shleshmadhara* (Supporters of Mucoid Matter); (5) *Purishadhara* (Supporter of Excrement); (6) *Pittadhara* (Supporter of *Pitta*, Bile ? ; Gall-bladder ;) (7) *Shukradhara* (Supporter of 'Semen'; Vesiculæ seminalæ) (Su.).

(E) Development of the Fœtus.

On the first day of conception the ovum is like a bubble (Ha.). In seven days it is like a round ball (Va.). In ten days it looks like blood ; in fifteen days it becomes solid, and in twenty days it becomes a fleshy mass ; in twenty-five days the five elements (Earth, Water, Fire, etc.), originate in it, and in one month become more evident (Ha.).

In the 1st month, a gelationus substance is only formed (Su.). It is a living, muddy, gelatinous, round mass ; but without any consciousness of its own ; the limbs and organs are either in a subtle or a rudimentary form (Ch.). Sex is not differentiated in the first month (Va.). All the five elements appear in it in this month (Ha.).

In the 2nd month, *Kapha* and *Pitta* act on the molecules of the primary elements and condense them ; a lump-like shape indicates the male sex ; an elongated shape, the female sex ; a tumour-like shape, a hermaphrodite (Su.). In fifty days, the limbs appear (Ha.).

In the 3rd month, five lump-like protuberances appear at the places where the five limbs (two hands, two legs, and the head) would be, and the minor parts and members of the body appear like extremely small papilae (Su.). Head, chest, abdomen, limbs, chin, nose, lips, ears, fingers and heels appear (Da.). All limbs and parts of the body at once appear ; each of the five elements contribute to form separate internal and external sense organs and limbs (Ch.). Hands, feet, and head are now clear ; minute organs become evident now ; with the appearance of the head, pleasure—and pain-sense also appear ; there is a duct which goes straight from the heart of the mother to the navel of the foetus, and supplies it with nourishment from the mother (Va.).

In the 4th month, all limbs and organs become powerful, and the fœtus is endowed with consciousness owing to the formation of the heart, which is the seat of consciousness ; the fœtus expresses its desire for things of taste, smell, etc. ; the enciente is thus called double-hearted (Su.). Others consider that she becomes double-hearted between third fortnight and the fourth month (V. Va.). For the first four months, the fœtus is in a liquid state (Su.). All small and big limbs and organs appear (Va.). In three and half months the head appears ; in the fourth month hair appears (Ha.).

In the 5th month, the foetus is endowed with mind and wakes up from the sleep of its subconscious existence (Su.). Life and movements appear (Va.). The soul becomes evident (Ha.). Flesh and blood in the fœtus increase in this month to a greater extent than in other months (Ch.).

In the 6th month, Cognition (Buddhi) comes (Su.). The limbs of the fœtus gain in firmness (Su.). Six months' embryos are the last that live, when born (Shatapatha-Brahmana). The fœtus begins to throb (Ha.). Strength and complexion increase to a great extent in this month (Ch.). Tendons, veins and arteries, hair, strength and complexion, nails and skin appear (Va.).

In the 7th month, all the limbs and members of its body are markedly developed (Su.). All limbs are fully developed and the fœtus puts on weight (Va.).

In the 8th month, the Vital Fluid (*Oja Dhatu*) in the heart of the fœtus moves from place to place; the Fluid passes from the body of the child to that of the mother, and *vice versa* ; if a child is born now, it may die for want of this Fluid, or through the agency of malignant demons (Su.). Even the life of the enciente is in danger (Va.). The Digestive Fire takes birth (Ha.).

In the 9th month, the foetus becomes active and is tired of its stay in the uterus (Ha.).

In the 10th or 11th month, it is born on account of the aggravation of *Vayu* Humour (Ha.).

In the 9th, 10th, 11th, and 12th month, parturition takes place; if it does not, something wrong with the fœtus should be suspected (Su.). From the first day of the ninth month to the end of the tenth is the proper parturition time ; after this, something wrong should be suspected (Ch.). If it remains in the abdomen after a year on account of *Vayu*, then only it causes harm (Va.).

The adjustment in the womb of the different limbs and organs of the fœtus at their proper places, the non-development of hairs on its palms and soles, and the subsequent cutting and falling off of its teeth are spontaneously brought about according to the laws of Nature and after the model of its species (Su.).

(F) Opinions about Development.

(*i*) *S*ushruta gives above Dhanwantari's view who holds that the development of all parts of the embryo goes on simultaneously ; these cannot be detected in the early stages owing to their extremely minute size. Charaka agrees with the above, for organs and other parts depend on the heart for nourishment ; they cannot therefore develop before the heart.

(*ii*) Kritvirya says that the heart is developed first since it is the seat of Mind (*Manas*) and the Intellect (*Buddhi*) ; or (*iii*) according to Kankayana Valhika, because it is the seat of all energy (Ch.).

(*iv*) Shaunaka says that the head is first developed since head is the only organ that makes function of all other organs possible (Su.) ; or (*v*) according to Bharadvaja because the head is the seat of all knowledge and senses (Ch.).

(*iv*) Parasara's son, and Bhadrakapya (according to Charaka) say that the development of the umbilical region of the foetus necessarily precedes, as it is through this part that it draws its nourishment (Ch.). (*vii*) Markandeya and Badish say that hands and feet are first developed since they are the only means of movements in the womb (Ch.). (*viii*) Subhuti-Gautama says that the development of the trunk is the earliest in point of time since all other limbs and organs lie soldered to, or are embedded in that part of the body (Ch.). (*ix*) Bhadra-Shaunoka says that the intestines are formed first, for it is the seat of *Vayu* ; (*x*) Videha says that the sense organs being the seat of intelligence are formed first (Su.). (*xi*) Maricha-Kashyapa says that it is impossible to pronounce any opinion (Ch.).

Physiology of the Foetus :—

Factors Governing Growth.

Four factors are necessary for a healthy child :—(1) The Menstrual Period (*Ritu*) ; (2) Healthy Womb (*Kshetra*) ; (3) The Nutrient Liquid (*Ambu*) ; (4) Healthy 'Semen' (*Bija*) (Su.).

The growth of the foetus depends on the good health of the mother and of the father, on observance of hygienic rules by the mother ; on natural developmental changes during the nine months ; natural growth ; on the oleagineus secretions from the uterus and the whole body of the mother ; and on the heat generated by these secretions (Ch.).

Nutrition and Metabolism.

Immediately after fecundation, the vessels (*Dhamani*) which carry the Lymph (*Rasa*) and run in all directions through the maternal body, foster the foetus with their transudation all through the life of the foetus (Su.).

The Lymph (*Rasa*) formed from the food of the mother fulfils three purposes :—(1) to nourish the mother, (2) to produce milk in the breasts, and (3) to nourish the foetus (Ch.). Through the Umbilical Cord (*Nadi*), the essential part of the Lymph enters the foetus, and hastens its growth and development (Su.).

The growth of fœtus in the womb is effected by the Lymph incarcerated by the *Vayu* in the internal passages of the fœtus's body; growth is caused by the Fire element (*Jyoti*) (in the umbilical region of the fœtus) fanned by the *Vayu* in the body of the fœtus; *Vayu* in combination with Fire expands the upward—lateral—and downward—coursing channels in the fœtus and thus brings about its growth (Su.).

The Preservers of the life of the fœtus are the Fiery and Lunar Principles (*Pitta* and *Kapha*), and *Vayu*; the three Primary qualities (*Satva*, *Raja*, and *Tama*); the five Sense Organs; and the Self-Conscious Personality (Karma Purusha); the 'Self' originates from the Lymph and is thus pependent on a proper regimen of diet and conduct (Su.).

The fœtus feels neithef thirst nor hunger, depends for its nourishment on its mother, and is fed by the various juices that ooze out of the mother's womb; these oleaginous juices enter through its skin pores or the umbilical cord; the mother's heart pours continuously various nourishing juices into the cord (Ch.).

Excretion :—

The fœtus does not excrete fæces or urine owing to (1) the scantiness of fecal matter in the intestines, and (2) the obstruction and consequent diminished admission of *Vayu* in its large intestine; it does not cry much as its mouth is covered by the amniotic membrane (*Jara*) and its throat is stuffed with *Kapha*; respiration, sleep, and movements are affected through those of its mother (Su.).

Motor and Sensory Functions :—

The fœtus begins to feel pleasure and pain immediately after the differentiation of the Sense-Organs; it, therefore, starts moving in the uterus; the fœtus has as it were two hearts; the mother contributes to form its heart, which is joined to that of the mother by Lymph-carrying ducts; these ducts feed the fœtus; since the hearts are so closely bound, the desires of either are the same; the desires of the fœtus are thus expressed through the mother; these desires should not therefore be neglected by the mother or other retations, otherwise, the fœtus either dies, or is deformed (Ch.). Gratification of these desires ensures the birth of a strong and long-lived child (Su.).

The fœtus feels pain in the same part of its body as the one in which its mother feels,—whether this pain be from an injury, or be the result of a deranged Humour (Su.).

Pathology of the Fœtus :—

I. *Monstrocities*—

(1) These are due to the non-gratification of the desires of the enciente ; (2) gratification of her improper longings ; (3) derangement of her Lymph (*Rasa*) (Su) ; (4) derangement of *Vayu* causes the fœtus to assume forms of different species *e.g.*, a snake, an animal, etc. ; or the fœtus may have different shapes, and have irregularly placed or contorted limbs (Va.) ; (5) serpents, scorpions or gourd shapes of the fœtuses are due to deadly sins of the mother ; (6) the shape of God, animal, or a monster is determined by the person's acts in a former existence ; (7) a boneless monstrocity is the result of a sexual act is which both the parties are females, and their 'Menstrual Fluids' unite somehow in the womb of one of them; (8) a thin boneless jelly-like mass (*Kalala*) is due to fecundation in the womb of a woman who dreams of sexual intercourse in the night following her mense period ; it is due to the absence of parental elements in the development of the fœtus ; the local *Vayu* carries the ovum to the uterus and exhibits signs of pregnancy which develops month by month till the full period of gestation (Su.).

II. *Congenital Peculiarities.*—

(*i*) *Desires for particular foods, Conduct and Character* are determined by those of its parents during the sexual act (Su.). *Mental Traits* are the result of acts of prior births (Ch.).

(*ii*) *Stupidity* is due to mother eating *Vayu*-generating substances (Va.).

(*iii*) *Effeminacy* is due to an act of impregnation foolishly or ignorantly effected during the menses of the mother.

(*iv*) *Masculine Traits* in a female child are due to the woman riding her husband during the sexual act (Su.).

(*v*) *Features of the Fœtus.*—(1) They are like those of the person of whom a woman thinks during the sexual act : (2) the fœtus is made up from the four elements (Earth, Water, Fire, and Vayu), which are obtained from the 'Semen.' 'Menstrual Fluid,' the food of the mother, and the actions of the fœtus's past lives ; whichever of these is powerful helps prominently to form the features of the fœtus (Ch.).

(*vi*) *Complexion depends on* (1) the admixture of the Earth, Water, Fire and Ether Principles ; (2) the colour of the food taken by the mother during pregnancy (Su.).

(*vii*) *Albinism and Grey Colour* are due to eating *Kapha*-generating substances by the mother (Va.).

(*viii*) *Baldness and Grey-headedness* are due to eating *Pitta*-generating substances by the mother (Va.).

(*ix*) *Colour of the Eyes* is influenced by the Fire Principle and the Humours (Su.).

(*x*) *Blood-shot Eyes* are due to the Fire Principle penetrating the blood of the fœtus ; *yellow pupil* (*Pingaksha*) is due to the same Fire Principle entering *Pitta* ; *white eye* is due to the same entering the *Kapha* ; *defective* eye is due to (1) the same entering the *Vayu* and (2) non-gratification of the enciente's desires (Su.).

(*xi*) *Blindness* is due to (1) mother eating *Vayu*-generating substances, (2) non-gratification of enciente's desires, (3) the failure of the Fire Principle (*Agni*) in reaching the region of the still undeveloped eyes of the fœtus, (4) improper conduct of the mother, (5) derangement of Lymph, and (6) injury to the particular part of the ovum (Va., Ch., Su.).

(*xii*) *Deafness, Dumbness, and Nasal Voice* are due to (1) non-gratification of enciente's desires, (2) gratification of improper desires, (3) improper conduct of the mother, (4) derangement of the Lymph of the mother, and (5) deranged condition of *Vayu* (Su.).

III. *Congenital Deformities.*—

(*i*) *Parental.*—These are generally due to (*a*) *Vayu* and other Humours of the parental secretions, (*b*) the ages of the parents, (*c*) injury to the particular part of ovum derived from the various sources.

(*ii*) *Maternal.*—These are generally due to (*d*) the Humours of the uterus, (*e*) irregularities in the food of the mother, (*f*) derangement of Lymph of the mother, (*g*) improper conduct of the mother, (*h*) forced straining by the mother in the absence of real labour pains.

(*iii*) *Fœtal.*—Deformities may be the result of action in past births.

(1) *Hump-back.*—It is due to (1) non-gratification of the wishes of the enciente, (2) derangement of *Vayu*, (3) forced straining in the absence of labour pains.

(2) *Irregularly placed and Contorted Limbs* are due to derangement of *Vayu* and other Humours, and to eating *Vayu*-generating substances (Va.).

(3) *Lameness and Blindness* are due to (1) ungratified desires of the enciente or (2) deranged condition of *Vayu* (Su.).

(4) *Deformed jaw-bones* are due to forced straining efforts in the absence of real labour pains (Su.).

(5) *Dwarfism and Cretinism* are due to (1) mother eating *Vayu*-generating substances, (2) non-gratification of the desires of the enciente, (3) gratification of her improper longings, (4) derangement of Lymph, (5) improper conduct of the mother (Su., Va.).

IV. *Congenital Maladies.*

(1) *Leprosy.*—If the father is a leper, the 'Semen' carries the tendency to the fœtus; if the mother is a leper, the 'Menstrual Fluid' carries this tendency; the same happens in all other hereditary diseases (Su.).

(2) *Paralysis* is due to non-gratification of the enciente's desires (Su.).

(3) *Sterility of the Mother and of the Father.* (1) The daughter bears no children if the female fœtus, or even its rudimentary uterus is affected by deranged Humours; (2) all the future children of such a daughter are born dead if the portion in the mother's 'Menstrual Fluid' which contributes to form the uterus of the female fœtus is affected by Humours. The same happens to a male fœtus if the corresponding elements in the 'Semen' of the father are affected by Humours (Ch.).

V. *Atrophy of the Fœtus.*—

Atrophy of the fœtus but not its death is also due to deranged *Vayu*; the abdomen does not appear to be so full and distended; the movements of the fœtus in the womb are slow or absent; if properly treated, it grows again (Va.). It is due to scantiness of Lymph, blocking of the ducts in the Umbilical Cord, or irregular diet (Kashyapa Senior). Drying of the fœtus may occur on account of its improper nourishment; if properly nourished later, it goes to full-term, but the process may take years (Ch.).

Treatment :—(1) Give enemas of medicated milk into the vagina in the 8th month of gestation, (2) give fatty food or invigorating diet to the enciente, (3) give milk cooked with drugs of restorative and corrective properties; (4) give meats (Su.); (5) give milk cooked with *Gmelina arborea* fruits, liquorice, and sugar (Va.). Treatment is the same as for Lina-Garbha (See Obstetrics Section).

VI. *Hypertrophy of the Fœtus.*—

Excessive growth of the fœtus tends to swell abnormally the region of the abdomen and is accompanied by anasarca of the legs. This can be checked or remedied with corrective or pacifying drugs (Su.).

VII. *Death of the Fœtus.*—

Ætiology.—The internal ducts and vessels of the mother, choked up with aggravated Vayu, bring about a weakening of the fœtus ; and if this state continues it may cause even the death of the fœtus (Su.). Aggravation of *Vayu*, *Pitta* and *Kapha*, or observing a contrary regimen may cause death (Va.).

Absence of any of the factors which help the growth and development of the fœtus may cause its premature birth or death (Ch.).

Death may be caused by (1) non-gratification of the enciente's desires, (2) if that element in the mother's 'Menstrual Fluid', which contributes to form the uterus of a female fœtus, is affected by Humours, all the future children of such a daughter are born dead ; the same happens to a male fœtus if the corresponding elements in the 'Semen' of the father are affected by Humours (Ch.).

Other factors are:—(1) unsuitable diet and toxæmias of food, eating in excess of pungent and heating foods, taking unbalanced food, fasts, heavy and constipating foods not satisfying the 'longings' of pregnancy ; (2) emotional disturbances of the mother, bereavement, loss of fortune, anger, grief, ambition, jealousy, fear ; (3) neglecting natural calls of urination, defaecation etc., suppressing the passage of flatus ; (4) emetics, purgatives, venesection, and enemas up to 8th month ; (5) hard work, carrying heavy burdens, wearing heavy clothes, sitting on hard places, travelling ; (6) external blow or injury, pressure on the womb ; (7) excessive sexual intercourse ; (8) sleeping at odd hours ; (9) any serious disease of the mother ; (10) an offspring (*a*) of a girl less than 16 years old by a man less than 25 years of age, or the offspring (*b*) of an extremely old man or woman ; or (*c*) of one suffering from a chronic affection of the genital organs, or (*d*) of one afflicted with any serious disease usually dies in the womb ; if it is born alive, it dies a premature death, or else becomes weak (Su., Ch., Va.).

Symptoms of Death :—Deva Brahma suggests that the death of a fœtus is known by rupture of the bladder ; the dead child lies like a weight on the hypogastrium, and presses upwards on the spleen, liver, lungs and the heart ; the mother has shivers, tremors, loss of consciousness, dryness of tongue, dyspnœa and perspiration ; she has a cadaverous smell in her mouth, and stands in danger of imminent death (Su.).

The abdomen feels moist, rigid, and cold ; there is a feeling of having a heavy stone inside the womb ; there is absence of movement of fœtus, severe pains other than the pains of labour, absence of vaginal discharge ; absence of normal defaecation and urination ; there is a tired feeling, giddiness, great discomfort, and dyspnœa (Ch.).

Wandering of the mind, loss of consciousness, thirst, eructations, collapse, vomiting, piteous look (Ha.).

Sings of Death.—(1) Absence of movements, and of (2) labour pains, (3) brown or yellow complexion of the enciente, (4) cadaverous smell of her breath, (5) colicky pain in the abdomen, and (6) distention of the abdomen due to decomposition of the child (Su))

Prognosis.—Tossing of the head in agony, cold surface of the body, absence of natural modesty, presence of nets of large blue veins covering the sides of the abdomen indicate the certain death of the enciente with the dead child locked up in her womb (Su.).

Treatment.—Remove the fœtus by tearing and removing the membranes ; or an experienced obsterician should perform an instrumental delivery (Ch.).

After removal of the fœtus, the mother should be given any of the six wines 'Sura,' 'Sidhu,' 'Madhu', 'Madira,' or 'Asava' ; the uterus is thus purified, and they make the mind cheerful ; she should be given tonic and health-preserving oleaginous medicines, and food agreeable to the puerperium until the Humours are alleviated, Root-Principles (*Dhatu*) strengthened, and the discharges are dried up ; oleaginous medication, enemas, suitable diets, and drugs of 'Stomachic,' 'Tonic,' 'Sweet', and 'Anti-*Vayu*' groups should be given (Ch.).

If a fully developed and mature fœtus is removed on account of its death in the womb, and also when the delivery is normal, the mother should be given oleaginous remedies (Ch.).

(*To be continued.*)

Reports of Societies, etc.

—:o:—

REGISTRATION OF L. I. M'S

CITY CONFERENCE ADDRESS

Dr. Kuppuswamy Sets out Grievances

The following are extracts from the welcome address of the Chairman of the Reception Committee, Dr. C. N. Kuppuswami, L.I.M. at the Second L I.M. Conference held yesterday :—

The most burning question that is agitating the mind of every one of us is that of registration. Our present status as non-registered medical practitioners is very humiliating. Our course of study includes instruction not only in the Indigenous but also in the Allopathic system of medicine. Indeed we are allowed to parctise as such. We are given appointments in the Local Boards and Municipalities. But all these advantages are counter-balanced by a great many limitations. An L.I.M. diploma-holder cannot aspire to be a medical inspector of schools. His medical certificate is not worth the paper on which it is written, No firm, no Government office, recognises it. Nor is it valid in a Court of Law. He may treat a patient either in his capacity of a private medical practitioner or of an officer in charge of a public dispensary and cure him of his disease. But when the patient wants him to bear testimony to his ill health, he is forced to send him to a registered medical practitioner thus admitting his own inferiority and exposing the patient to additional expense. Can any thing be more degrading. Can any thing be more injurious.

WORSE IN RURAL PARTS

In rural parts it is still worse. For example, patients treated by an L.I.M. have to go to distant places in search of registered medical practitioners if they require certificates. Again riots may occur and the un-registered medical officer is called upon to dress the wounds. But he is forbidden to issue certificate to that effect. Thus at every turn he has to acknowledge inferiority. Instead of being of use to the villagers, he is at times a curse and a source of inconvenience. But, however, it is gratifying to note that our brothers employed in the Government School of Indian Medicine are at least spared this degradation. I find no possible reason why the same provision should not be extended to others as well, thus saving them from the present situation that makes them lose as fast as they gather practice.

A POSSIBLE DANGER

Many of the difficulties mentioned above, I am sure, will vanish, if we are allowed to be registered in the same way as other practitioners possessing equal qualification But, here, I must caution against a danger that is threatening us. It seems that there is a move to have the L.I.M. diploma-holders registered along with other practitioners of the Indigenous system of medicine. They are mostly people that have not undergone any regular course of training and there is no adequate machinery to test their efficiency. Therefore no one can be expected to be prepared to extend to them the same privileges as those enjoyed by allopathic medical practitioners. Hence our agitation should be directed not towards registration of any type but one which secures to us self-respect and dignity.

In service, we are equally unfortunate. We are, no doubt, eligible to be appointed to posts under the control of Local Bodies and Municipalities. But there is always a prestige attached to Government appointments that is lacking in other services. Again unless the Government encourages us by extending to us their patronage. our position as medical men is bound to remain undefined.

Research Work

Side by side with our agitation for better recognition, we must devote some part of our attention for strengthening our claim. This, in my opinion, can to a very great extent be accomplished by having our course of study increased and by having better facilities for clinics afforded by the increase of the number of beds.

One other improvement that I consider of the utmost importance is facility for research work. The Indigenous system of medicine has suffered long years of comparative neglect ; many of the works have been spoiled by recent interpolations and additions. Many of them have not seen the day-light of publication. And others there are that owing to lapse of time and consequent changes in language, customs and manners are not properly understood. A research committee, if appointed, will among other things, help to remove these difficulties.

Not Representative

The Central Advisory Board of Indian Medicine does not possess the form we suggested. Our suggestion was that the board must be independent of the Government School of Indian Medicine, with a paid secretary. We also expected that the board would be fully representative. But it was not to be ; the board is filled in such a way as to enable the Principal easily to command a majority of votes. The well-known principle, that no really representative body can afford to have within it any two persons that stand in the position of a superior and a subordinate, has been ignored. There is not a single L. I. M. in the board who can boast to be a free independent practitioner.

The president of our association, from its formation to this day, has been guiding our deliberations with an enthusiasm hardly surpassed by that of any one of us. Special mention must also be made of the name of the Maharaja of Pittapuram who has been evincing great interest in our cause ; his regular financial help from the very beginning has always been felt indispensable. Before I leave this subject, I feel bound to thank people of the type of Dr. David Thomas M. L. C. whose hard fight on the floor of the Legislative Council, to amend the Madras Medical Registration Act of 1914 cannot be forgotten.

I fear, I may be creating a false impression in the minds of my hearers if I fail to mention the uniform sympathy and support that was shown by the ministers in charge of the medical portfolio. We expect the same sympathy and support from our present Chief Minster, the Rajah of Bobbili, who is all energy and enthusiasm.

Now, Ladies and gentlemen, I have only to offer our congratulations to our Captain G. Srinivasamoorty, for the title of Vaidyaratna conferred upon him. It is well known that his knowledge of Indian Medicine is not in any way inferior to that of any other vaidyaratna. His work for this system of medicine, his able guidance of the affairs of the Government School of Indian Medicine during a very trying period, will ever be remembered by the well wishers of the Indigenous system of medicines. I hope, we will have occasion in the near future to congratulate the other members of the staff.

In conclusion, I pray that our conference under the able guidance of Dr. David C. Muthu will solve many problems that confront us and enable us to march on from success to success.

—*Swarajya, dated* 30-12-32.

Health and Hygiene

DAN RIGHER RETELLS A STORY.

There is a story going the rounds of natural healing circles that will bear repeating. It is a story that generally staggers the hearer—a story that compels the average man and woman to gasp in unbelief. And yet the incidents all happened within the past sixty days and my investigation —made from many angles and in many quarters—convinces me of their correctness. But even so, I must keep my hero anonymous—at least temporarily.

It seems that there dwelt in the Southwest a Naturopath of exceptional ability—a man who by hard work had wrested the truths of non-drug healing from the dust of ages and whose books have become recognized treatises wherever Naturopathy is known.

For years this Naturopath had struggled against adversity—had been bettered and buffeted—had opened health centers and sanitariums only to have them closed by some flint-hearted sheriff—had preached the gospel of sunshine and fresh air and who had ever damned all laxatives and cathartics, be they made of drugs or natural herbs. He was an iconoclast—a fighter that gave no quarter.

It appeared that the fame of this Naturopath had seeped its way into a great Eastern city where it finally came to the attention of a publishing company which needed just such a pen as this Naturopath possessed. Investigations seem to have confirmed this idea Eventually an invitation, accompanied by railroad fare and a substantial expense check, was despatched to this Naturopath with a tentative offer of a large salary, an absolute freedom of editorial censorship and a contract for a stated term of years.

Arriving in the East, the Naturopath was welcomed royally. The representatives of the publishing company were well pleased with his appearance and his manner. He was feted and entertained. No expense was spared. All were mutually satisfied. The Naturopath was given every opportnnity to demonstrate his ability. His voice on the radio electrified the air-waves. The fans deluged the broadcasting stations with his praise. A proverbial "find" had been made.

The contract price and employment period were agreed upon. There was no haggling. What mattered a few thousand dollars a year one way or the other. At last, it seemed, the encircling arms of a kindly Fortune had taken this martyr to her bosom.

Treading on air, the Naturopath visited his old teacher—the Father of Naturopathy—and shared with him the news of his new employment. The Dean of Naturopaths was profuse with his congratulations and following the departure of the lucky Southwesterner confided this interesting information to two subsequent visitors.

"That upstart !" exclaimed one, a prominent non-drug lecturer of the District of Columbia. "The publisher is crazy—that mountebank was nothing but a janitor in a Naturopathic school."

"Janitor or not," returned the other visitor—a well-known writer and a Naturopathic philosopher with a world-wide following, "I do not care where or how he obtained his knowledge—to my mind he is the most scientific of all non-drug physicians in this country."

When the Naturopath called at the publishing office the next day to affix his signature to the contract he was informed, as though a mere afterthought, that he would have to endorse a herb laxative as part of his employment. There could be no equivocation. The contract would stand or fall on that one point.

The temptation of St. Anthony was a mild form of torture compared with this situation. The Naturopath had closed his business at home, had bade his friends farewell, had left his followers with a full knowledge of the object of his trip, had come East expressly to obtain this position —a position which guaranteed him a kingly financial future in the literary work he so dearly loved. This enchanted vision shimmered before his eyes. On the other hand there was his bare, barren ideal in which artificial laxatives had no place—an ideal for which he had starved—an ideal associated with years of suffering—an ideal that had made him almost an outcast among his fellows. And in the background was the picture of jeering "friends," of sarcastic commiserations—and of the drudgery, the heat, the dirt, the dust and the hardships of the Southwest.

The representatives of the publishing company seemed to sense something of the battle that was raging in the soul of the Naturopath. They closed about, assuring him of their esteem, their friendship, their admiration and suggested that he could "work up gradually," to the endorsement of the laxative. They wished to influence his decision. It must be favourable to them. They needed his vitriolic pen—they wanted his silvery voice—they realized that the acquisition of his indomitable spirit meant success to their vast enterprises. Into his ears they poured promises of tremendous triumphs—of editorial masterpieces—of business expansion beyond the seven seas—of riches that would have fascinated Avarice.

* * *

Three days later a tired individual stepped from the Pullman of the Overland to the dusty brick pavement of the station platform in a little city in the Southwest. He glanced about him with something akin to relief as he nodded to the porter who hurried forward, exclaiming :—

"Why, I thought—"

"I guess I was not the right man," replied the traveller as he picked up his heavy grip and walked slowly in the direction of the hotel.

* * *

And Modern Medicine would call this man a "quack!"

Medical News & Notes

:o:

RAT BAITS AND POISONS.

The more dangerous rat poisons—arsenic, phosphorus, and strychnine —have largely been superseded by barium carbonate and red squill. Both of these are relatively cheap.

The following is a general formula for a barium carbonate bait :—

Commercial barium carbonate powder	2
Grated cheese	1
Dripping	1
Fine oatmeal ...	4

Melt the fat and mix thoroughly with the dry ingredients to form a firm paste.

Red squill may be used in similar proportions, *e.g.* :—

Red squill	2
Grated cheese	1
Dripping	1
Fine oatmeal	4

Instead of powdered red squill, the liquid extract may be mixed with an equal amount of milk and bread dipped into the mixture to form a thick paste. The bait is laid in saucers or tin lids in places frequented by the rats. It is a good plan to vary the form and appearance of the bait at intervals, owing to the suspicious nature of the rat.

Recent investigations abroad have shown that thallium sulphate-wheat bait (1 in 1,000) is highly effective. The method of preparation is as follows :—

Mucilage of starch (1 in 30)	15 oz.
Sodium bicarbonate	1 oz.
Sugar	4 oz.
Glycerin	½ oz.
Saccharin	48 grains.
Thallium sulphate	200 grains.

Water, a sufficient quantity.

Dissolve the thallium sulphate in hot matter, and add to it the other ingredients dissolved in the hot starch mucilage. Incorporate the mixture in 23 lbs. of whole wheat, preferably by adding the paste in small lots to proportionate amounts. A 10 gramme (160 grains) portion of the dried grain is a lethal dose for an adult rat, and such portions wrapped in paper may be used as bait.

Thallium acetate requires to be handled with care ; and skin absorption can be avoided by the use of rubber gloves when handling the salt in solution. Care should be taken in all cases not to place the bait where it can be consumed by domestic animals.

Rat viruses consist of microbic cultures, which are stated to owe their efficiency to the *Bacillus aertrycke* and the *Bacillus enteritidis* of Gaertner. These cultures cause intestinal disease in rats, the infected rat conveying the disease to his fellows through fouling their nests or food. The harmlessness of these viruses to human beings has been questioned, but it appears to be established that the virus manufactured in this country has no action on man, domestic animals, and other rodents, such as rabbits and guinea-pigs. In order to be effective, the virus should be fresh, and the contents of the container should be used up at one time.

Rat varnishes are ordinary lithographic varnishes in which a minimum of solvent has been used. Colophony is the usual basis, and the solvents may be linseed oil, rosin oil or rosin spirit, or a mixture of any of these. The colophony should be heated to 150 degs. C. for about twenty minutes, the oil added gradually, and after boiling for a further fifteen minutes the mixture removed from the source of heat and the spirit slowly mixed with it.

When rats have died in accessible places, *e.g.*, near a fireplace or in drains, chloride of zinc may be used as a deodoriser, for this combines with and neutralises the products of putrefaction. For deodorising similar smells which arise from an inaccessible place, such as under a floor, a small hole may be bored and some perfume or essential oil added to the solution of zinc chloride and poured through the hole.

—(*Ph. Journal*)

CASTOR OIL IN COSMETICS.

Castor oil has been used in cosmetics for many years. Recently, red oil (oleic acid) has disputed its field. A particular advantage of castor oil is its solubility in alcohol. Other fatty oils and mineral oils as well are insoluble and, therefore, not so well suited for hair oils, brilliantines and like. The castor oil cosmetic of this type does not have to be shaken before use as do others. Another advantage is the viscosity of castor oil. For this reason it is often added to mineral oil hair preparations to increase viscosity. However, castor oil does not mix well with mineral oil and can be added only in small quantity. Castor oil is also a softening agent, and is added only in small proportions to nail polishes. Castor oil is an ingredient of pomades, creams and other cosmetics compounded with fatty oils.

Sulphonated castor oil, known as turkey red oil, is an interesting product in cosmetics. However, the products sold are castor oils sulphonated to different degrees. Sulphonated castor oil is used in permanent wave preparations. It may be mentioned that aqueous solutions of certain salts or vegetable slimes are not effective permanent hair wave preparations. A sulphonated castor oil wave oil contains 44 per cent. water and 49 per cent. total fat consisting of sulphonated castor oil with an acid number of 50. Castor oil is present in form of sodium soap. Acid number of castor oil, figured on dry basis, should be about 113.

Sulphonated castor oil is used in tooth pastes, where most important function is dissolving film and tartar from teeth. It also has disinfecting action which depends largely on proportion.

Sulphonated castor oil is a very effective wetting agent and is used in toilet waters, nail preparations, skin creams, etc.

—(*Drugs and Cosmetic Industry.*)

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Public Health Policy in Bengal

The recent debate in the Bengal Legislative Council on public health policy reveals the widespread demand for better health laws in the province which is "notoriously malarious." Indeed, for the last decade, the criticism of the Department has been growing louder, more widespread and more insistent. A glance at the health rate in Bengal for the last 30 years reveals the aweful result of 32.7 per mille. between 1894-1903, 31.5 between 1904-13. 30.6 between 1914-23. If this rate of decline remains constant, it will take 150 years to fall to 16.4 per mille. and 200 years will elapse before it approaches that of England. The responsibility of the Government is greater here than elsewhere because many of the evils have been aggravated by social custom, and the ignorance and apathy of the people. The essential factor needed is a training of the mind to revolt against the dirty, dark, dingy areas, offensive smells, dampness, vermins and all those thousand and one things upon which one can expatiate after a brief visit to the slum. Physical development and school hygiene have in the past been grossly neglected. "I have seen a large class of coloured children" said Sir Ronald Ross, "almost all of whom were suffering, at the time, of fever or enlargement of the spleen, being taught the dates of the accession of the plantagenate kings."

All these give an incentive to the mobilisation of the Public Health department that requires a reshuffling of the whole machinery for which I like to make the following suggestions.

(1) The whole of Bengal should be divided into Sanitary districts, each in charge of a Sanitary Officer whose main duties would be (i) The prevention of communicable and epidemic diseases, (ii) The provision of medical aid, (iii) the spread of the knowledge of hygiene and other laws of health to the masses.

(2) *Ad hoc* sanitary authorities should be created in every union or combination of unions, constituted after the model of the English Local Government Board of 1894 in England. The example of Madras, where village unions or circles with public health functions have been formed in certain districts, might well be copied. The 2009 local "adhoc" sanitary authorities in England worked wonderfully well. It is a well known fact that in Bengal, District Boards in the past have spent 35.6 per cent of their incomes in communications, .6 p. c. on water supply, 2.5 p.c. on building, 22 p. c. on education, 7 p. c. on medical relief but less than 1 p. c. on Sanitation. "Adhoc" authorities get over difficulties of this kind by concentrating their attention on one main function.

(3) Attempts should be made to apply reforms as recommended by the Royal Sanitary commission of 1869-71 in England.

(4) Measures which have been initiated in most advanced cities should be extended to all rural areas. In every rural sanitary district, drastic measures should be taken to ensure pure water supply, to spread a thin shed of petroleum on the surface of stagnant waters and introduce into them certain type of fish.

(5) Travelling dispensaries should tour round the rural areas giving advice and providing simple remedies, as was initiated in the Punjab in 1908 and successfully carried into effect there.

Very often, bright projects are formed, but when questions of putting them in actual practice comes to the fore, the Government betrays not a little callousness. At the International Labour Conference in Washington of 1919 it was suggested that the countries represented should carry out inquiry into the question of maternity benefits for women workers. Two such enquiries were made in India, one by Dr. Banes in Bombay, and the other by Dr. Curijel in Bengal. A Maternity Benefit Bill was subsequently introduced in the Assembly by Mr. Joshi ; but nothing has yet been proceeded with. The whole question of Sanitation and hygiene was taken by the All-India welfare Association at its first Conference in Bombay in 1922 and by the Imperial and social Hygiene Congress held in October 1925 in Wembly ; but nothing has found favour with the Government here. The All-India Sanitary Conferences of 1911, 1912 and 1914, held in Bombay, Madras and Lucknow respectively, besides a host of provincial conferences, proved to be moon-shines.

The Hon. Mr. B. P. Sinha Roy spoke the other day during the debate in the Legislative Council that "there was no substance in the charge that the Public Health department had been neglected ;" but the above facts go to hold the country.

COLD CREAM.

The following formula contains liquid paraffin instead of a vegetable oil, but requires the presence of sodium benzoate on account of the stearin :—

White wax	...	...	54
Spermaceti	...	...	30
Stearin	...	...	173
Stearin	...	...	43
Water	...	...	72
Borax	...	...	10
Sodium benzoate	...	...	1

Original Articles

JAIJJATACARYA.

(SEVENTH CENTURY A. D.)

BY

DR. GIRINDRA NATH MUKHERJEE, B.A., M.D., F.A.S.B.

Calcutta.

From the preface to the *Nivandha Samgraha*, the well-known Commentary to the *Susruta Samhita* by Dallanacarya, we know that Jaijjatacarya was a *Tikakara* or Commentator (*Srijejjadam tikakaram* श्रीजेज्जड़ं टीकाकारं । Ni. S., p. 1.)

The name is variously spelt as Jaijjatacarya, Jeijata, Jeijada, Jada.

The earliest author who quotes Jaijjata is Vrinda-Madhava in his *Siddhayoga* (Ch. xlix, verse 30). The chronology of the commentator may be ascertained from the remarks made about him in the *Vyakhyamadhukosa*, the commentary of *Madhava-Nidana* by Vijaya Raksita and Srikantha Datta,

भट्टार जेज्जड़गदाधरवाप्यचन्द्रश्रीचक्रपाणिवकुलेश्वरसेनभव्यैः ।
ईशान-कार्त्तिक-सुधीर-सुकीरवैद्यैर्म्मतेय माधवं सुखैर्लिखितं विचिन्त्य ।

P. 1. ch. 1.

जेज्जड़वाप्यचन्द्रमाधव-कार्त्तिक कुण्डादयो व्यचक्षते । P. 6. ch. 1.
जेज्जड़कार्त्तिकुण्डादयः । P. 17 ज्वरनिदानम् ।
ईशान जेज्जड़ौ P. 21 ,,

and in the *Vyakhyakusumavali*, the commentary on the *Siddhayoga* of Vrinda Madhava :—

जेज्जटकार्त्तिकभोज P. 160.
जेज्जट गयादास P. 348.

Works of Jaijjatacarya :—

1. Jaijjata's *Commentary on the Caraka-Samhita.*—In the *Siddhayoga*, p. 320 Vrinda-Madhava quotes Jaijjata thus.—

सं निध्याग्लमधूनो मानं व्योषादेर्मिलितस्य च ।
किंचिच्च कर्षपादांशः [illegible] मता ॥

दशमूली हरितक्यासु(तु)ल्या कंसहरितकी ।
मानं तेनात्र तत्रभ्यं चरके प्राह जैज्जटः ॥

Thus we learn that Jaijjata wrote a commentary on the *Caraka-samhita*. The following statements should also be noted in this connection.—

यच्च चरकेण निदानस्थानेऽभिषङ्गजः पुनर्व्वातपित्ताभ्यामित्युक्तं तत्प्रायिकं मन्तव्यमिति जेज्जड़ः । V. M. K. P. 28. ज्वरनिदानम् ।

रससामता षष्टहात् परतोप्यनुवर्त्तते एवमर्थं जेज्जड़ोपीच्छति यदेवं लिखति चरकसुश्रुत टीकायां etc. V.M.K. ज्वरनिदानम् P. 39.

The commentary, however, is not available now.

2. Jaijjata's *Commentary on the Susruta-samhita.*—It seems that Jaijjada wrote a commentary on the *Sausruta Tantra*, the work of Vriddha Susruta or Susruta, the Elder.

वृद्धसुश्रुतव्याख्यं व्यचक्षाणो जेज्जड़ः । V.M.K. ज्वरनिदानम् । P. 32.

To support this supposition we may quote the following statements :—

चरकसुश्रुतटीकायाम् V.M.K. ज्वरनिदानम् । P. 39

विस्तरस्तु सुश्रुते जेज्जड़े द्रष्टव्यः ॥ Ibid. P. 88. यक्ष्मानिदानम् ।

Ms. I. O. $\frac{2646}{1842}$, p. 928.—It contains a copy of Chandrata's Revision of Susruta's Text Book, in which there are marginal notes which are suggested to have been copied from Jaijjata's Commentary. But the statement requires confirmation. Hoernle remarks, that "the notes are, in all probability, extracts from Dallana's Commentary, with which they verbally agree." He cites examples which contain references to Gayadasa, and so proves that "whoever the author of the notes may have been, he certainly cannot have been Jaijjata, who lived considerably earlier than Gayadasa and is probably quoted by him."

Jaijjata and Jada.

Dallana (p. 546) discusses the meaning of the phrase "*Dharma-etara.*" He himself adopts the interpretation "*dharmadharma*" or "both right and wrong," while he ascribes to Gayi the interpretation "*Adharma*" simply. This is found in the Gayi Ms. fol. 20 b, where Gayi discusses the point, and says that "*dharma-etara*" must mean "other than right conduct," that is to say "*adharma*," or "Sin", simply because both Sruti and Smriti (*i.e.* revelation and tradition) ascribes the birth of twins to sinful conduct on the part of the parents, and prescribe expiation. Hence it cannot mean "both *dharma* and *adharma*" *i. e.*, making twin-birth consequent on both right and wrong. This argument of Gayi seems obviously correct, and that Dallana nevertheless preferred the rival interpretation can only be due to his considering that it enjoyed greater authority. Dallana does not mention this authority, but Gayi discloses it, for he saya (fol. 20 b, 1. 5) that it is the interpretation of Jada. Now this is a most interesting statement. Jada must have been one of the sources on which Dallana based his commentary, and seeing that among his sources, Jaijjata is the only one that bears some resemblance to Jada, the suggestion made by Prof. Jolly (*i.e.*, p. 116) is strongly confirmed that Jada and Jaijjata are the same person. But if this is so, Jaijjata must have been also the author of a text bok ; for Gayi. (fol. 52 a, 1. 8) ascribes also to him a *tantra*. The form Jaijjata never occurs in the Cambridge Gayi Ms. ; on the other hand, the form Jada occurs four times (fol. 20b, 1. 5 ; fol. 26b, 1. 6 ; fol. 52a, 11. 8, 10 ; fol. 5 4b, 1.3). It does not seem probable, therefore, that it is a textual corruption of Jaijjata".—*J. R. A. S.* 1906,; Hoernle's *Ancient Indian Medicine.* p. 301.

Quotations from Jaijjata in *Vyakhyamadhukosa.*

1. निश्चित्य दीयते प्रतिपाद्यते व्याधिरनेनेति निदानमिति जेज्जड़ः।

2. अत्र जेज्जड़कार्त्तिककुण्डादयः समादधते उत्सर्गापवाद भावेन व्यवस्थितेरिति। P. 17.

3. निर्भुग्ने ....ईशानजेज्जड़ौ अन्तः प्रविष्टे इति। P. 21.

4. जेज्जड़स्तु मलसाह विबन्धे इति वचनात्। P. 25

5. क्रुद्धस्य वेपमानो दृश्यते नहि दृष्टेऽनुपपन्नत्वमिति जेज्जड़ः। P. 27

6. यच्च चरकेण निदानस्थानेऽभिषङ्गजः पुनर्व्वातपित्याभामित्युक्तं तत्प्रायिकम् मन्तव्यमिति जेज्जड़ः।

7. भूतसामान्यलक्षण। इति यस्य यस्य भूतस्य देवग्रहादेरभिषङ्गात् कूपन्तितस्य यल्लक्षणं रोदनादि तेन सामान्यं सदृशं लक्षणं येषां ते तथा इति व्याचक्षते जेज्जड़ादयः। P. 28.

8. प्रकृतिसमवायरब्धास्त्वेकदोषद्विदोषजा अपि भवन्ति इति जेज्जड़ः। P. 30.

9. आदावेकदिनं न भूत्वा पुनर्द्दिनद्वयं भूत्वा अन्ते एकदिनं न भवतीति व्याचक्षते जेज्जड़ादयः। P. 31.

10. ततः श्लेष्मणोनित्यानुषक्तत्वे नेति जेज्जड़ः। P. 32

11. त्वकशब्देन.........जेज्जड़स्तु त्वचमेवाह। P. 33

12. अन्येऽपि विषमा रात्रिज्वरादयो वोद्धव्य इति जेज्जड़ः। P. 34

13. श्वसनं श्वासः सदनमिति पाठान्तरम् तन्नयुक्तमिति जेज्जड़ः। P. 38

14. अष्टाहस्य पक्वलक्षणमिति जेज्जड़ः। P. 39

15. रससामता अष्टाहां परतोपानुवर्त्तते एवमर्थं जेज्जड़ोपीच्छति यदेवं लिखति चरकसुश्रुतटीकायां तरूणा सामताष्टाहादपैति। P. 39

16. दैर्घरात्रिक इति दीर्घरात्रानुवन्धीति जेज्जड़ः। P. 41.

17. गम्भीरादयोपि जेज्जड़ादिभिर्व्याख्याताः P. 41

अरोचकनिपीड़ितमित्यत्रस्थाने जेज्जड़ः पाठद्वयं पटति दुरात्मनमुपद्रुतमिति, व्याचष्टे दुरात्मानं दुष्टान्तःकरणं उपद्रुतमिति, श्वासादिभिरुपद्रवैरुपद्रुतं, दुरात्मभिरुपद्रुतमिति पाठान्तरे तुरगराक्षसादिभिर्द्दृष्टिमित्यर्थः। P. 42.

18. मानसजत्वाविशेषाद्वा शोकजे अवरूद्ध इति जेज्जड़ः। P. 46

19. व्याख्यातञ्च जेज्जड़ादिभिः सर्व्वैरेवमयं वातपित्तजः उक्तः। P. 48

20. दुरात्मानमिति पाठान्तरे दुष्टान्तकरणमजितेन्द्रियामिति जेज्जड़ः। P. 50

21. एवं स्नेहाजीर्ण विसूचिकाविषार्शक्रिमिप्रभृतिजन्येष्वतिसारेषु षट्कातिरिक्तत्वं प्रतिक्षिप्तं वोध्यं अव्यभिचरितदोषनिषिद्धत्वादिति जेज्जड़ः। P. 50

22. जेज्जड़स्त्वाह प्रमितमतीकालभोजनं प्रसृतेति पाठे नष्टशक्तिकं धान्यादिकमाह। P. 57.

23. रसशेष............रसशब्देन रसरानाहारोऽभिधीयते, तस्य शेषोऽपरिणतिलक्षणो रसशेषो इति जेज्जड़ः। P. 68.

24. पाण्डुरोगश्चिरोत्पन्नः कालप्रकर्षात् खरीभूतो जठरतां गतो न सिध्यति अचिरोत्पन्नोऽपि शूनानां मध्ये योवा पीतानि पश्यति स पाण्डुरोगो न सिध्यत्यपरमसाध्य लक्षणमिति जेज्जड़ योजना। P. 79.

25. दाहेत्यादिना विपद्यत इत्यन्तेनापरसाध्यलक्षणमिति जेज्जड़ः P. 81

26. मेचकाभं आगारधूमाभञ्च समारगन्धकादि मणिमसृनोक्त कृष्णवर्णस्यैव वर्णोमेचक इति जेज्जड़ादय:। P. 83

27. तनु पैचिके कृष्णत्वं पठितम् न च तदसाध्यं नैवं अतिशब्देनात्र विशेषितत्वात् तेन तत्र मनाक्कृष्णत्वं बोध्यमिति जेज्जड़:। P. 86

28. उच्यते अवयवेन विग्रह: समुदाय: समासार्थं यथा बहुवृक्षं वनमिति समाधानं, विस्तरस्तु सुश्रुत जेज्जड़े द्रष्टव्य:। P. 88.

29. जेज्जडस्तु त्रिरूप सम्पत्तिमेव व्याख्यातवान। P. 89.

30. दोषा अपि व्याधिशब्दं जनयन्त इत्यागमात् इति जेज्जड़:। P. 93

31. जेज्जड़ेन गयदासेनापि स्वतन्त्र कामरूपत्वेनेति। P. 98.

32. नाम्यते आकुञ्चते देह इति सम्बन्ध इति जेज्जड़-गयदासौ P. 101.

33. नेत्रस्य विभ्रान्त स्तब्धत्वे कालभेदादिति जेज्जड़:। P. 102,

34. जेज्जड़स्तु सन्निरुध्यते श्वास इति तस्मै वेति श्लेष्मण:। P. 104

35. ज्वरेण वा मूर्च्छा ज्वरमूर्च्छेति जेज्जड़:। P. 105

36. निरोध्य वेगनिरोध: अथवा कुयोगिनां कुम्भकादिरूप एकत्र निरोध इति जेज्जड़:। P. 105

37. अन्ये उदावर्त्तेत्यादिना प्रतमकस्य उपसर्गमाहुरिति जेज्जड़:। P. 105

38. घोरोपद्रवयुक्ता मुखशोषादिर्व्बलवद्भिरुपद्रवैः समन्विता इति जेज्जड़:। P. 117.

39. यथास्वञ्च विभावयेदिति तां मूर्च्छां वातादिभेदेन जानीयात् व्यक्तरूपावस्थायां नतु पूर्व्वरूपावस्थायामिति जेज्जड़:। P. 119

40. गुढ़ोच्छ्वासश्चाप्यस्पष्टोच्छ्वास:। मूढ़वदिति पाठे सन्निरुद्धं इत्यर्थ: इति जेज्जड़:। P. 121.

41. अत्र हि कुम्भस्य शेषांशो मीनस्य प्रथमांश एतद्द्वयं मध्यशब्देनोच्यते इत्याहु जेज्जड़ादय:। P. 125

42. जेज्जड़ास्त्वाह सत्त्वं मन:। P. 132.

43. स्थूलाक्षो विवृतनेत्र इति जेज्जड़:। द्रुतमटनो द्रुतगति: अतएव त्वरितगतिरिति जेज्जड़ पठित:। P. 138.

44. देह धृक आत्मा, मन इति जेज्जड़:। अनेकदृष्टान्तप्रयोजनं जेज्जड़लिखितं। P. 139

45. गर्भशुक्ररजोनाश इति गर्भाशयानां शय्यायां वाताधिष्ठितत्त्वेन गर्भाद्यग्रहणमिति जेज्जड़। P. 143

46. तोदः शूलं अर्त्तिः पीड़ा सा च पादपार्श्वग्रीवादिष्वक्षरमाणमिति जेज्जड़ः। P. 143

47. वातशोणिताभ्यां जात इति जेज्जड़ः। P. 153

48. अष्ठीला उत्तरपथे वर्त्तुलो पाषाणविशेष इति जेज्जड़मतानुवादी कार्त्तिकः। P. 155

49. शीतोष्णग्रहणमनुक्तपरस्परविरोध द्वन्द्वोपलक्षणार्थं, तेन गुरुस्निग्धाभ्यां लघुरूक्षयोर्ग्रहणं बोध्यमिति जेज्जड़ः। P. 161

50. चयापचयवानिति कदाचिदुपचीयते, कदाचिदपचीयते, एतच्च सामान्योक्तमपि वातिके व्यवतिष्ठते, तल्लक्षणे तदभिधानादिति जेज्जड़ः।

51. नचोक्तं जेज्जड़गयदासाभ्यां हरिश्चन्द्रमतमेवानुमतमिति। P. 176.

52. बाधाशब्देन चात्र नानाविधा पीड़ेति। P. 181

53. पूर्व्ववदिति यथा पूर्व्वमुक्तमन्नरसं उपस्नेहन्यायेन वह्निर्निःसृत्योदरं जनयति यथा जलं वह्निर्निसृत्योदर जनयतीति जेज्जड़ः। P. 213

54 क्षतजस्याभ्यन्तर भावान्न निर्द्दिष्टः क्षतजः इति तु जेज्जड़ः। P.234

55. शतोपनकस्यालनिका........चालनिकाकाया अपि तुल्यत्वप्रवृत्ति निमित्तमिति मन्यमानेन जेज्जड़ेन चालनिकातुल्यत्वमवर्णितं। P. 255

56. त्वक्शब्देनात्र जेज्जड़स्तु त्वचमेवाह। P. 269.

Jaijjata quoted in the Nivandha Samgraha :—

1. तेन श्रीजैज्जटटीकाकारं श्रीगयदास भास्करौ पञ्जिकाकारौ श्रीमाधवब्रह्मदेवादीन टीप्पनकारांश्च। P. 1

2. विशेषतस्त्वित्यादि पाठन्तु कौश्वदेव निवन्धकारैः कथञ्चिदेवव्याख्यातो वहुभिस्तु जैज्जठादिभिः परिहृत एव। 1. xiii. P. 117

3. जैज्झटाचार्य्यस्तु अमूं श्लोकं (ch. 1, xxx. vs 9) मनार्षंकथयति। P. 206.

4. पित्तप्रकोपेषु मध्ये शोकभयवातप्रकोपनयोः पाठोऽनार्ष इति जैज्झटः। P. 218.

5. फलेष्वपि हरितकी अस्याग्रे तैलेष्वेरन्तुजं तैलं स्वरसे कारवेल्लिकेति जेज्झटाचार्य्यः पठति। तन्नेच्छति गयी। P. 395

6. “नारिकेलोदकं गुरु”—जेज्झटस्तु लघ्विति पठन्ति, लघुत्वञ्च शीघ्र परिणामित्वमिच्छति॥ P. 424

7. जेज्झटस्तु तत्त्वनेकौषधि रसप्रसादःक्षीरतां गतः।
सर्व्वप्राणभृतां तस्मात् सात्म्यं क्षीरमिहोच्यते।

इति तदुच्यते सर्व्वेषामेव समानगुणानां समानकर्म निर्द्दिष्टुमाह। P. 424

8. जेज्झटस्तु गव्यन्तु शीतं स्निग्धमधुरविदाहीति पठन्ति। शेषन्तु तन्मते गोक्षीरस्यैव गुणाः। P. 425

9. बृहल्लघुपञ्जिकायां जेज्झटस्तु—

कफकृच्चविदाही च रक्तपित्तनिबर्हणः।
शर्करासमवीर्य्यस्तु दन्तनिष्पीड़ितो रसः॥

शर्करासमवीर्य्य इत्यत्र वीर्य्यशब्दः शक्त्यभिधायकः, नतु शीतादि वीर्य्यवाचकः। कस्मादविदाही उच्यते? वहिरस्थायित्वेन वाततापाद्यनुपहतत्वात्। P. 445

10. मर्कटहस्ततृणं वा तृणं वा तत्फलाकिण्वं मधुलकं असञ्जातमद्यं मधुपुष्पोत्थमिति जेज्झटः। P. 448

11: हायनकः शङ्खवाक इति लोके। जेज्जटस्तु घोटकपुच्छः इत्याह। P. 458.

12. पाटल........अनार्षोऽयं पाठ इति जेज्जट। P. 461

13. त्रिभिश्चरणयुगलचञ्चुभिराहन्ति विलिखन्ति तग्रहलाः टाना इति जेज्जटः। P. 469

14. जेज्जटस्तु शिरः इत्यादि संग्रहश्लोकत्वेन पठति। P. 481

15. जेज्जटस्तु सप्तलां यवतिक्ताभेदमाह। P. 501

16. जेज्जटश्चरकमतानुसारेण सैन्धवानन्तरं सौवर्च्चलं पठन्ति। P. 509

17. जेज्जटस्तु यद्यपि बालमूलकं त्रिदोषघ्नं तथापि तस्य न यूषकचर्णि स्नतिरन्तीत्याह। P. 517-18

18. तक्राम्ला इति काम्बलिकः अम्लानां बहुत्वाज्जेज्जटमते तु दधिदाड़िममाषशाकस्नेहयुक्तं व्यञ्जनं खड़ इत्युच्यते। P. 518

19. जेज्जटस्तु पयःस्थाने मस्तु इच्छति। P. 516

20. चतुर्थः पुनरभिघातन इति श्रीजेज्जटाचार्य्यस्तु, तन्नेति गयदासाचार्य्य । P. 560

21. वेपनस्य कम्पनशीलस्य गर्भिनी-सूतिका बालवृद्धक्षीणेष्वसृक्क्षये इति अमुं पाठं श्री जेज्जटादय आचार्य्या न पठन्ति । P, 562.

22. शतोपलकः चालनिकेति जेज्जटाचार्य्यः । P. 581 तन्नेच्छति गयदासाचार्य्यः ।

23. दद्रुसिध्मयोः सुश्रुत-चरकादिषु तयोरभिधानभेद इति जेज्जटाचार्य्य समदधाति, तन्नेच्छति गयदासाचार्य्यः । P. 587

24. अरससिद्धं रसकेतु जेज्जटाचार्य्येन स्वकपोलकल्पितः श्लोक इति गयदासाचार्य्यो न मन्यते । P. 590

25. यथाच गुदादास्रावबद्धदिति जेज्जटाचार्य्येन पुनः पूर्व्ववत् इत्यतन्यानुदराणि यथा भवन्ति । तथा इदमपीति व्याख्यातम् । तन्नेच्छति गयदासाचार्य्यः । परिवृत्तनाभिः उच्छिन्ननाभिरितिसन् क्षुभ्यति । कम्पते च इति कम्पनमतिशयेन । तेषामष्टानामपि सामान्यः लिङ्गं व्याख्यातम् । तन्नेच्छति गयदासाचार्य्य इति दर्शयन्नाद् आध्मानमिति । जेज्जटाचार्य्येन पुनरेतेउपद्रवा व्याख्याताः । तन्नेच्छति गयदासाचार्य्यः । P. 605-6

26. यदा सोऽस्मृगो गर्भो वस्तिरित तथा
उत्क्षिप्यन्त इवाङ्गानि मुत्र वस्तिश्च भिद्यते
क्लोम प्लीहा मकुच्चैव पुष्प संहृदये तथा
गर्भेन पीड़ितं पित्तादूर्द्ध्वं पक्वामति क्रिया
सा सूयते मुह्यति च कृच्छ्रश्वास च जायते
पुति गन्ध स्तथा स्वेदो जिह्वा तालु च शुष्यति ।
वेपथे भ्राम्यति तथा जीवितं चोपरूध्यते ।
एतैर्लिङ्गं विजानियात् मूढ़ं गर्भं चिकित्सकः । इति
केचित् इति पठन्ति, तं न पठनीयं पुनरुक्तत्वात्, जेज्जटचार्य्यादिभिः परिहृतत्वाच्च । P. 611.

27. जेज्जटाचार्य्यस्तु साभ्यन्तरम् षड्गस्तोरभावमेव मन्यते । P. 614

28. इति षष्ठं ग्रन्थिं पठन्ति । तच्च जेज्जटाचार्य्यादिभिः परिहृतम । P. 626

(*To be continued.*)

FEVER IN AYURVEDA

BY

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Fever is a deranged condition of health due to aggravated or attenuated *Doshas*, *Dhatus* or *Malas*.

All the physical and mental pains (diseases), the flesh is heir to, are due to individual or national *Karma* (activities) of men.

Karma may be divided into three parts, viz. *Kayika* (physical) *Vachika* (verbal) and *Manashika* (Mental).

It is undoubtedly better to be prudent and farsighted in matters of *Karma* than to disregard and reject the time-honoured science of life (Ayurveda), the *Ancient System of Science*, which teaches the humanity as to how to keep good health.

Before I proceed with the subject I would be justified to state what is health in a nut shell, so that we may see for ourselves that any deviation from that condition of health would be considered as abnormal or diseased state of health which would require particular care to be taken to get back to normal.

From the following Sanskrit Couplet of Ayurveda it could easily be understood what constitutes good and normal health :—

"समदोष: समाग्निश्च समधातु समक्रिय:
प्रसन्नात्मेन्द्रिय मना: स्वस्थ इत्याभिधीयते ॥"

When *Doshas* (Vayu, Pitta and Kapha), Agni (Body Metabolism), *Dhatu* (*Rasa*, *Rakta*, *Mansa*, *Meda*, *Asthi*, *Majja* and *Sukra*), *Indriya* (Five sensory organs, viz. *Chakshu*, *Karna*, *Nasika*, *Jiwha* and *Twaka* and five motor organs viz. *Bak*, *Pani*, *Pada*, *Payu* and *Upastha*) and mind are in harmony with one another, the human frame is considered to be in a perfect healthy state.

Diseased condition of the body or mind takes place when equanimity of *Doshas*, *Dhatu*, *Indriyas* and *mind* is not in order.

The failure of circulation results in disease and ultimately to death.

Strong drugs, serums, vaccines etc. do not purify blood, nor do they vitally stimulate its circulation. On the other hand, they add to the very cause of the diseases by injecting foreign matter into the blood stream and thus violate the very principle of health.

Normal circulation of blood is the under-lying principle of good health according to physiologists as well as pathologists. Consequently to employ a drug, foreign to human system, intramuscularly or intraveinously direct to the blood stream to kill a pariticular variety of organism is nothing short of disservice to the humanity. Proper treatment, therefore, should be to aim at the cause of the disease which disturbs the equanimity of *Dhatu*, *Mala* etc. According to Ayurveda it is the *Doshas*, (Vayu, Pitta and Kapha) which disturb the normal circulation of the system consisting of *Dhatu* etc.

Therefore to equilibriate *Doshas* means to nutralise and eliminate the toxic waste and congestion caused by aggravated or attenuated *Doshas*.

The hygienic measure consisting of fresh air, sufficient sunshine, judicious excercise, dietetic measure and artificial therapeutics such as Electric and Radium therapy etc. only tend to aid in the purification and normal flow of blood in the human economy nutralising the congestion and eliminating the impurities of blood circulation. These therapies appear to have indirectly or involuntarily imbibed the idea of Ayurveda the sole object of which is to prolong the healthy existence of life by bringing back the *Doshas* to their normal function which got out of order because of the deranged *Vayu*, *Pitta* and *Kapha* singly or in combination of one another on account of some *Karma* or activities of men.

Mythologically fever is said to have been originated by the passing of angry breath of *Maheswara*, the God of Destruction, at Daksalaya where He felt Himself insulted. *Vide* Couplet below :—

"दक्षापमानसंक्रुद्ध रुद्रनिश्वास सम्भव: ॥"

Rudra is here compared metaphorically with Dynamical force. It being out of order on account of provocation at *Dakshalaya* (human economy) deranged the equilibrium of *Vayu*, *Pitta* and *Kapha* resulting in production of excessive heat per nostril. In fever one would often mark one's breath hotter than that of normal state of health.

There are eight kinds of fever in Ayurveda, viz. (1) Bataja, (2) Pittaja, (3) Slesmaja, (4) Bata-Pittaja, (5) Bata-Slesmaja, (6) Pitta-Slesmaja, (7) Sannipataja, (8) Agantuja

ज्वरोऽष्टधा पृथग्द्वन्द्व संघातागन्तुज: स्मृत: ।

Prithaka-azar (simple fever) comprises either Bataja, Pittaja or Slesmaja, *i.e.* where there is derangement of a particular *Dosha*. *Dwandaja* type of fever includes Bata-Pittaja, Bata-Slesmaja and Pitta-Slesmaja, *i.e.* when two of the Doshas are deranged in combination. *Sannipataja* type of fever corresponds with the manifestations of Typhoid fever, Pneumonia, Enteric fever, etc. described in allopathy. Three of the Doshas are deranged in Sannipataja type of fever. *Agantuja* fever is caused by the derangement of either Vayu, Pitta or Kapha or in combination of one another. In the latter type of fever we find the following six sub-divisions.

1. *Avighata*-azar (Fever caused by external injury), 2. *Avisapa*-azar (Cursed fever), 3. *Oshadhi*-azar (Fever caused by smelling obnoxious medicines), 4. *Kama-azar* (fever from passion), 5. *Soka-azar* (fever caused by sorrow), 6. *Vaya-azar* (fever caused by fright).

Besides the fevers described above, further two kinds of fever viz. Vishama-azar and Jeerna-azar could well be included in the classification of fevers according to the couplets of Ayurveda quoted below :—

यः स्यादनियतात् कालात्शीतोष्णाभ्यां तथैव
वेशतश्चापि विषमोज्वरः स विषमः स्मृतः ॥

The paroxysm and onset of Vishama-azar are irregular and periodicity is not marked and manifestation tallies with that of Malarial Fever.

Visama-azar is subdivided into five classifications, viz. 1. *Santata* (Remittent type), 2. *Satata* (Double quotidian), 3. *Annyaduskah*, (quotidian), 4. *Tritiaka* (Tartian), 5. *Chaturthaka* (quartan type).

अहोरात सततको द्वौकालावनुवर्त्तते ।
अन्येद्युष्कस्त्वहोरात्रादेक काल' प्रवर्त्तते
तृतीयकस्तृतीयेऽह्नि चतुर्थेऽह्नि चतुर्थकः
समध्ये ज्वरयत्यह्नीत्वाद्यन्ते च विमुञ्चति ॥

Jeerna-azar corresponds with chronic Malarial fever or Kala-azar. When *Visama-azar* persists even after 12 days from its onset which is considered to be its course in a milder form Ayurveda diagnoses the fever as *Jeerna-azar* : vide couplet stated below :—

"यो द्वादशीभ्यो दिवसेभ्यो उर्द्ध्वं दोषत्रयेभ्यो
द्विगुनेभ्य उर्द्ध्वं नृणां तनौ तिष्ठति मन्दवेगो
भिषग्भिरुक्तोज्वर एव जीर्णः ।"

Aetiology of fever :—

मिथ्याहारविहाराभ्यां दोषाह्यामाशयाश्रयाः
वाहिर्निरस्य कोष्ठाग्निं ज्वरदाः स्युरसानुगाः”

Irregular and injudicious diet and physical activities interfere with the equanimity of *Doshas* giving rise to irritation in *Amasaya* (Mucous membrane of the system) where the atttenuated *Dosha* or *Doshas* produce inflammation and retard the process of metabolism resulting in combustion of the circulatory system. On account of this combustion there is some abnormal heat which is felt by the perception of hands over the skin. The abnormal combustion arising from the change in the waste products generates heat and accelerates temperature :—

Symptoms of fever :—

“स्वेदावरोधः सन्तापः सर्व्वाङ्गग्रहणं तथा
युगपद यत्र रोगे च स ज्वरो व्यपदिश्यते ॥”

The disease in which the skin becomes dry, disagreeable sensation and pain in body are marked together with sensation of heat, is called fever.

Treatment of fever should be made according to the deranged *doshas* but sometimes the physician may not particularise a *dosha* or *doshas* from the perception of pulse and in such cases of fever he should consider it as *Nava-azar* (simple acute fever).

Nava-azar or simple Acute Fever.

There is a popular belief that Ayurvedic medicines are useless in acute attack of fever, but the notion is apparently based under a misapprehension and ignorance of the people. From my practical experience extending over two decades, I make bold to say with precision that Ayurvedic medicines and treatment are never the less inferior to the Allopathic System of treatment and act with encouraging result without producing any harmful effect on the human organism as is the case with strong Western drugs like quinine etc.

In Nava-azar (Intermittent fever) the following symptoms manifest in part or in full :—

1. Watering of mouth
2. Dreamful sleep
3. Depression of spirit
4. Aversion to food or drink
5. Impared appetite
6. Dryness of the skin
7. Heavyness of limbs
8. Weakness
9. Frequent micturition
10. Rise of temperature

11. Constipation
12. Tongue dry and coated
13. Burning of eyes, palms of hands and sole of feet
14. Head-ache
15. Shivering and chattering of teeth
16. Nausea and vomiting
17. Disagreeable sensation or noises in ear

Bagbhat says that in all diseases totality of the symptoms as described in Ayurveda may not be present in all the cases :—

सर्व्वेषु रोगेषु सर्व्वानि लक्षणानि न दृश्यन्ते प्राया:

When all the symptoms are present in any individual case, the physician is to consider the prognosis of the case as not a favourable one, vide Sloka from Iti-Mela Samhita below :—

सर्व्वानि लक्षणानि पुरुषे विनाशाय।

In Charaka Chikitsathanam Chapter III we find the Sloka as under :—

ज्वरे लङ्घनमेवादावुपदिष्टमृते ज्वरात् ।
क्षयानिलभय क्रोधकामशोकश्रमोद्भवात् ॥

In acute fever, fasting has been recommended but in Tuberculosis, *Batika* fever and fevers due to *Anger*, *Passion*, *Sorrow*, and *Fatigue* fasting must not be indulged.

In Chikitsathanam of Charaka at Chapter III we note again that in the treatment of Nava-azar *Panchanam* is of great use if employed in relation to the aggravated Doshas.

लङ्घनं स्वेदनं कालो यवाग्वोस्तिक्तकोरस:
पाचनान्याविपक्वानां दोषाणां तरुणे ज्वरे ॥

The causes under which *Vayu*, *Pitta*, *Kapha* are deranged are given below for the guidance of physicians as the same is essential for practical application of technique in the treatment of diseases according to principles of Ayurveda.

1. Causes for *Vayu* derangement.

व्यायामाद् अतर्पनात् प्रपतनात् भङ्गात् जागरणात्
वेगानाञ्च विधारनाद् अतिशुच: शैत्यादतित्रासत:
रूक्ष-क्षोभि-कषाय-तिक्तकटुकैरेभि: प्रकोपं प्रजेत्
वायुवारिधरागमे परिणते चान्नेऽपराह्णेपि च ॥"

Vayu becomes abnormal from physical over-exertion, fasting, mortification, vexation, fall from a considerable height, external wounds or injury, wasting of *Dhatu*, night-watching, disregard to the call of nature, sudden fear, mental shock, use of excessive cold, injudicious dietary consisting of bitter, pungent and irritating food and at the accumulation of clouds in the atmosphere as well as in rainy season.

2. Causes of *Pitta* derangement :—

कटूम्लच्च विदाहि तीक्ष्णलवण क्रोधोपवासातपै:
स्त्रीसम्पर्क तिलातकी दधि शुक्तावनालादिभि:
भुक्ते जीर्य्यति भोजने च शरदि ग्रीष्मे सति प्रादिनां
मध्याह्ने च तथार्द्धरावसमये पित्तं प्रकोपं व्रजेत् ॥”

Pitta system is deranged from the use of pungent, acid, irritating articles, alchohol, indigestible food, excessive table salt, Til Oil or food prepared with Til Oil, as well as from supressed anger, fasting, exposure to the sun, excessive co-habitation. *Pitta* is also likely to be excited during digestion and in the seasons of summer and autumn as well as during the midday or at midnight.

3. Causes of *Kapha* derangement :—

गुरुमधुररसातिस्निग्ध-दुग्धेक्षुभक्ष्य
द्रव्य दधि दिननिद्रापूपसाप: प्रपूवै:
तुहिन पतन काले श्लेष्मण: संप्रकोप:
प्रभवति दिवसादौ भुक्तमांत्र वसन्ते ॥”

Kapha system is deranged from the use of indigestible food, sweets, fat, raw milk or spoiled milk, Treacle, Liquor and cooling drink, curd, cakes, excessive *ghee* or fatty food and sleeping during day time. *Kapha* is also excited after food during spring season and during the first part of the day as well in the time of dews.

From the above it is seen how the *Doshas* could be excited from the change of atmosphere, dietary and activities of the human being and the careful and judicious attention to the exciting causes would naturally prevent a large number of mental and physical sufferings.

I would now discuss pulse in relation to *Vayu*, *Pitta* and *Kapha* so that the Physician may adjudge the derangement of *Doshas* from the perception of pulse.

In Ayurveda knowledge of the perception of pulse in relation to *Vayu*, *Pitta* and *Kapha* is absolutely necessary for a Physician as the diagnosis and prognosis of deaseases are entirely dependent on the knowledge of pulse.

How to feel the pulse :—

Vayu, *Pitta* and *Kapha* are perceived under index finger, middle finger and third finger respectively.

“पित्ते व्यक्ता मध्यमायां तृतीयाङ्गुलिगा कफे
वातेऽधिके भवेन्नाड़ी प्रव्यक्ता तर्ज्जनीतले ।”

We find another passage to support the foregoing one :—

“आदौ वाते मध्ये पित्तं अन्ते श्लेष्मा प्रवर्त्तते ”

I give in short the details of pulsation here as the matter is rather too bulky for the subject under discussion. The above description of pulsation would suffice the purpose. I would now state what is the progression of pulse in health and in fever.

Normal pulse flows in the movement of (*Kencho.*) earth-worm.

“भूतलागमन प्राया स्वस्था स्वास्थ्यमयी शिरा ।”

Pulse and simple fever :—

“ज्वररोगे च धमनी सोष्णा वेगवती भवेत् ॥”

In fever pulse becomes hard and quick.

In Bataja type of fever pulse is soft, weak and pulsation is at intervals ; but in complicated Bataja type it is hard, full and quick :—

सौम्या सूचा स्थिरामन्दा नाड़ी सहजवातजा
स्थूला च कठिना शीघ्रा स्पन्दते तीव्र मारुते ॥”

In derangement of Vayu the movement of the pulse is wavering : in Pitta the progression is jumping : in Kapha, movement of the pulse is slow. In Dandwaja type, the progression is complex.

वाताद्वक्रगता नाड़ी चपला पित्तवाहिनी
स्थिरा श्लेष्मवती ज्ञेया मिश्रिते मिश्रिता भवेत् ॥

Description of pulsation in relation to Vayu, Pitta and Kapha with reference to movement of particular animals :—

सर्पजलौकादिगतिवदन्ति विबुधाः प्रभञ्जनेन नाड़ीम्
पित्ते च काकलावकभेकादिगतिः विदुः सुधियः
राजहंसमयूराणां पारावत कपोतयोः
कुक्कुटादेर्गतिं धत्ते धमनी कफसङ्गिणी ॥

In aggravated Vayu, pulsation is like the movement of snake or leech.

In Pitta derangement, pulsation is like the movement of crow, shark and frog.

In Kapha derangement, pulsation is like the movement of duck, pigeon, spot-necked pigeon, pea-fowl and fowl.

Hinguleswara Rasa is one of the efficacious remedies in Rasa Chikitsa and its use in Vatika-Azar is rather wide but from the recipes of the medicine we note that it would be a valuable medicine in simple acute fever as well :—

In acute fever (Nava-azar) treatment should consist of the following lines :—

(a) Fasting as technique.
(b) Employment of Diaphoretic.
(c) To watch the course.
(d) To Prescribe bitter medicine.
(e) To administer alkaline solutions.
(f) To use some carminative agent.

The course of Nava-azar is seven days and during its course Ayurveda does not advise to employ any strong drug. Only *Panchana* (decoction of suitable herbs) would suffice to cope with the troubles effectively.

"सप्ताहात् परतोऽस्तब्धे सामे सात्पाचनंज्वरे ।
निरामे शमनं स्तब्धे सामेनौषधमाचरेत् ॥"

Before the 7th day of fever no strong drug should be used as the same may aggravate the inflammatory condition and disturb the mucous secretion of the system. Only the medicines of vegetable-kingdom suitable to the condition of the patient should be prescribed with greater advantage.

But should any complication arise, phyisician must not waste time and allow the patient to go without treatment as in such cases Ayurveda is too liberal to prescribe medicines according to Rasa-Chikitsa of Ayurveda : vide sloka quoted below :—

"न दोषाणां न रोगाणां न पुंसाञ्च परीक्षणम्
न देशस्य न कालस्य कार्य्यं रसचिकित्सिते ॥"

Now a days it is advisable to follow the spirit of the above couplet of Ayurveda rather than to allow the fever to run its course with only *Panchana*. The couplet enjoins to take up treatment of Nava-azar irrespective of all other objections with Rasadhikara medicines coupled with *Panchan* treatment.

The following *panchan* (decoction) is very useful to bring down the fever with its concommittant symptoms :—

R/

Gulancha (Tinospora cordifolia)	¼ tola
Nim bark (Margo)	"
Padmakastha (Prunus Padam)	"
Red Sandal Wood	"
Aqua	[illegible] seer

Boil the above over gentle fire and reduce to 2 oz. ; strain through a linen for use. To be taken twice a day. This would give the desired result in two or three days time.

In Nava-azar where there is great thirst, Sarasangapaniya should be given to drink as the same would stimulate the kidneys and secretion of the skin and bring down the body heat neutralising the toxin from the system.

Therapeutic action of the above ingredients is as under :—

Gulancha (Tinospora cordifolia) – Bitter, tonic, alterative, stomachic, antiperiodic, hepatic, demulcent, diuretic, stimulant, and aphrodisiac.

It is more efficacious than quinine in malarial fever, with or without enlargement of liver and spleen, anæmia and dropsy.

Nim Bark (Azadirachta Indica)—Antiperiodic, vermifuge, stimulant, insecticide, antiseptic, stomachic and antipyretic.

Padamakastha (Prunus Padam)—Bitter, tonic soothing and carminative.

Raktachandan (Ptero carpus santalinum)—cooling, tonic astringent, parasiticide, diuretic, demulcent and disinfectant.

Receipes of Sarasangapaniyam are as under :—

मुस्तपर्पटकोशीर चन्दनादी च्य नागरैः
शृतशीतं जलं देयं पिपासाज्वरशान्तये ॥

Mutha (Mulathi)	gr. 44
Khetpapra (Oldenlandia Corymbosa) ...	gr. 44
Bana Root (Root of Fragrant Grass) ...	gr. 44
Rakta Chandan (Ptero-carpus santalinum) ...	gr. 44
Bala (Povania Ororata)	gr. 44
Sunth (Dry Ginger)	gr. 44

Take above together and boil in ½ a seer of water over gentle fire and reduce to 2 oz., then strain through a linen for use.

Therapeutic action of the above ingredients is as under :—

Khetpapra—It is rich in alkaloids of Potassium and Calcium, mostly as chlorides. It is febrifuge and is indicated in remittent fever with gastric irritability and nervous depression.

Bana Root (The root of fragrant grass)—Tonic, stimulant, antispasmodic, diaphoretic, diuretic and Rajasthapaka (emmenagogue).

Sandal—Cooling, sedative, astringent, disinfectant, diuretic, expectorant, is indicated in bilious fever and in genito-urinary diseases.

Bala (Povania Ororata)—Cooling, carminative, diaphoretic, diuretic and *Mridukara* (demulcent).

Ginger (Zingiber Officinalis)—It is aromatic, stimulant, carminative, stomachic, *Lalabardhaka* (Sialagogue) and digestive.

In case it does not suffice prescribe the following medicines :—

R/

Rambana Rasa	1 pill

Thrice a day with honey and water of sugar if *Vayu* derangement is marked ; but it should be administered with honey and half burnt *Patal* juice with success if *Pitta* seems to have been deranged ; while in derangement of *Slesma* the physician should administer Rambana Rasa with honey and ginger juice or with juice of Ocimum sanctum or leaves of *Bael* tree.

In my practice I derived admirable result from Rambana Rasa in Nava-azar when used with either of the following combinations :—

R/	Ramabana Rasa	1 pill
	Honey	M x

Mft. paste and add the following :—

Juice of	Kalpanath (Kalmegh)	dr. i
,,	Tulsipatra (Oci. Sanc.)	dr. i
,,	Bael patra (Leaf of Bael Tree)	dr. i
Pulv.	Nisadal (Ammonium Chloride)	gr. v
,,	Sorah (Potas. Nitr.)	gr. v

To be taken thrice a day till the fever is arrested

Therapeutic action of the ingredients is as under :—

Gum of Sondal (Oroxylum Indica)—astringent, bitter, tonic, stomachic and diaphoretic.

Pipul Mool (Root of Piper Longum)—carminative, tonic, stimulant, vermifuge, diuretic and aphrodisiac.

Mulathi (Cyperus Rotundus)—Diuretic, Diaphoretic. astringent, emmenagogne, vermifuge, tonic and stimulant.

Katki (Black Hellebore or Licrorrhiza Kurron)—Laxative, stomachic and is useful in bilious fever.

Haritaki (Terminatic Chebula)—Stomachic, Laxative, tonic, aperient, antibilious and adjusts all the static forces viz. Vayu, Pitta, and Kapha.

Kalpanath (Kalmegh)—Anthelmic, febrifuge, tonic, stomachic, antipyretic and cholagogue (mridubhedaneya), Highly efficacious in intermittent fever.

Tulasipatra (Ocimum sanctum)—Expectorant, antiperiodic, anti-catarrhal and demulcent.

Bael Patra (Aegle marmelos)—Nutritive, Laxative, antipyretic, anti-catarrhal, anti-bilious and febrifuge.

Nisadal (Amm : Chloride)—Expectorant, alterative, induces mucous secretion and stimulates the action of mucous membrane. It is useful in catarrhal and liver troubles, flatulence, biliousness and in intestinal ulceration.

Sora (Potas Nitr.)—Refrigerant, efficient diuretic and diaphoretic. It is highly efficacious in bleeding, rheumatism, catarrh, dropsy and urinary diseases.

If the bowels are constipated prescribe the following :—

R/	Rambana Rasa	1 pill
	Honey	M V

Mft. paste, add infution of the recipes stated at (a) oz. 1.

To be taken twice a day. This would move the bowels, remove the pain in the limbs and eliminate inflammatory congestion in the system.

(a)	Crushed Gum of Sondal (Oroxylum Indican) ...	gr. 78
,,	Root of Long Pepper (Piper Longum)	gr. 78
,,	Mulathi (Cyperus Rotundus) ...	gr. 78
,,	Katki (Black Hellebore) ...	gr. 78
,,	Haritaki (Myrobalan)	gr. 78
	Aqua add	1 lb.

Boil the above over gentle fire, reduce it to 2 oz. and strain through a linen for use.

Recipes of Rambana Rasa :—

Corrected	Parada (Hydrargyrum)	1 tola
,,	Sulphur	1 tola
Pulv.	Mitha (Aconite Ferox)	1 tola
,,	Cloves	1 tola
,,	Balck pepper	2 tolas
,,	Jaiphal (Nut Meg)	½ tola

Mix well together and rub in tamarind juice to paste and prepare pills of two grains each.

Therapeutic action of the recipes of Ramabana Rasa :—

Corrected Parada—Antiseptic, *Lalabardhaka* (sialagogue), *Mriduvedaka* (cholagogue), tonic, alterative. In small doses it is a blood tonic. In the stomach it is converted into chloride of sodium and mercury and stimulates the secretion of biles, liver and cells. It is antipyretic and is widely used in fevers of all description.

Corrected Sulphur—It is bitter and astringent and is widely used with mercury in almost all diseases. It is alterative (*Paribartaka*), tonic, laxative, diuretic and insecticide and stimulates the secretion of liver, kidneys, skin and mucous membrane.

Mitha (Aconite Ferox)—Diaphoretic, diuretic, anti-diabetic, anti-pyretic. It reduces tension and frequency of pulse and is a sedative for respiratory centre. In large doses it is a powerful sedative.

Cloves (Myrrus Coryophyllus)—It is *Khudhabardhaka* (stomachic), *Dipaka* (Carminative), *Sugandhi* (aromatic), *Swasahara* (anti-spasmodic), *Sodhaniya* (antiseptic), promotes perspiration, biles and urine and stimulates salivary glands, liver, kidneys bronchial membrane, digestion, and circulation of blood.

Black Pepper (Piper Nigrum)—In taste pungent and acrid and in action anti-pyretic, anti-periodic and carminative (Dipaka).

Jaiphal (Myristica Fragrans)—It is aromatic, stimulant, digestive, carminative and aphrodisiac. In large doses it is narcotic.

Tamarind (Tamarindus Indica)—It is highly acid, carminative, digestive, laxative and anti-bilious.

Recipes of Hinguleswara :—

Long pepper (Piper Longum)	...	...	1 tola
Corrected Hingul (Cinnabar)	...	...	1 tola
Corrected Mitha (Acon. Ferox)	...	...	1 tola

Mix well together and rub in water to paste and make pills of one grain each.

To be given thrice a day with honey and ginger juice in the morning and honey and Tulsipatra juice (Ocimum Sanctum) in the evening.

In the inflammatory condition of the lungs it is useful with honey and Bansalochana Pulv. (The Manna of Bamboo).

In Slesmic types, it is useful with honey and camphor in very small doses.

Therapeutic action of Recipes of Hinguleswara :—

Long Pepper (Piper Longum)—It is stimulant, aphrodisiac, vermifuge, carminative, alterative, diuretic, diaphoretic and Rajasthapaka (emmenagogue).

Hingul (Cinnabar)—Antiseptic, Lalabardhaka (sialagogue), purgative, alterative, and tonic and is indicated in almost all sorts of fever in combination with aconite.

Mitha (Aconite Ferox)—Diaphoretic, diuretic, anti-periodic, anti-pyretic, anti-diabetic. It reduces tension and frequency of pulse and is a sedative for respiratory centre. In large doses it is narcotic and poison.

(*To be continued*).

GYNÆCOLOGY, OBSTETRICS, AND PEDIATRICS OF THE AYURVEDISTS

BY

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(*Continued from our March issue*)

GYNÆCOLOGY.

Introduction :—

Agnivesha asks Atreya.—"Women are the main source of happiness of man, and of man's progeny; since women are destroyed by various Diseases of the Generative Organs, I woud like to hear the ætiology, symptomatology and therapeutics of these diseases." (Ch.). Vagbhata also says, "Preserve the women at any cost from incurable diseases; they are the source of children; of the four periods in life, the Married Period is, after all, the most important" (V., Va.).

Ayurvedists discuss the Disorders of Function of the Generative Organs in the Anatomy Section, and Morbid Gynæcology (*Yoni-Vyapata*) in the Treatise on Pediatrics.

Anatomy :—

(1) *The Pelvis.*—

The lower part of the body of the females is heavier than the upper ; the reverse is the case in the males (Ch.).

The females have one bone in the genital parts corresponding to that in the penis (Ch.).

The following is a description of the Male Pelvis :—

The pelvic cavity contains the bladder, the end point of the bladder, penis, waist, testes, and rectum (Va.).

The pelvis is formed by five bones ; two bones are in each of the hips ; one bone is in the pubis, one in the anus, and one in the sacrum , the hip bones are of the flat type, and the other three are irregularly formed (Su.).

There are three joints about the hip bones ; the joints in the region of the hips, the anus, and the vagina resemble the back of the palm (*Samudga*). The joints of the flat bones of the pelvis are of the suture type (*Sivani*) ; there are sixty ligaments in the lumbar region (Su.).

(2) *The Uterus.*—

Of the three extra organs with a cavity inside, peculiar to females, one is the uterus (*Garbhashaya* or *Dhara*) ; it is adjacent to the urinary bladder and is located in the space bounded by small intestines above and the large intestines (Su.). The other two organs are the two breasts which contain milk (Sha.).

The term *Yoni* is used collectively or severally to mean the Uterus, the Vagina, and the Vulva. The Vulva is below the bladder, and above it is the uterus (Su.).

The generative organ of a woman resembles in shape the navel of conch-shell, and has three involuted turns like those in a mollusc ; the uterus is situated at the third posterior involuted turn ; the uterus also resembles in shape the mouth of a fish,—narrow at the opening and expanded at the upper end (Su.).

The fœtus lies in the uterus during gestation (Su.).

The entire length of the vagina and the uterus is twelve fingers ; the distance between the points below the anterior side of each of the thigh joints is twelve fingers ; the waist is sixteen fingers. The fingers, the standard of measurement of lengths, are that of the person examined (Su., Ch.).

A vagina may naturally be studded with hairs along its entire length (Su.).

The females have three outlets to the body more than in the males, of which one is in the generative organ and carries off the 'Menstrual Fluid'; (the other two are in the breast) (Su.).

The females have ten extra fascias (*Peshi*) not found in the males; four of these are situated in the parturient canal; two are about the vulva, and two are in the internal opening of the vagina; three fascias are about the region of the Os Uteri, and three along the passage of the 'Menstrual Fluid' and the 'Semen'; the muscles found in the penis and the scrotum correspond to the covering of the uterus owing to the absence of those organs in her body (Su. Va.).

The down coursing channels (*Dhamanis*) are the channels for the downward course of flatus, urine, stool, 'Semen,' 'Menstrual Fluid,' etc.; they sustain and maintain the integrity of the parts of the body below the navel region, such as the intestines, waist, Urine and Stool Principles, genital organs, anus, bladder, and lower limbs; two *Dhamanis* carry the 'Menstrual Fluid' in women; there are 32 veins in the pelvis (Su.).

The two ducts (*Srotas*) carrying the 'Menstrual Fluid' have their roots in the uterus as well as in the *Dhamanis* which convey the 'Menstrual Fluid' (Su.).

The eight ducts (*Srotas*) of the pelvic cavity are the raphe of the perineum, the cords corresponding to testes of the male, the anal tract, the urinary ducts, the urine carrying ducts (Ureters), the bladder, and the vagina. There are 'Vital Points' (*Marmas*) in each of the above regions (Su.).

The ducts (*Srotas*) of the pelvis are :—The two urine-carrying ducts with their roots in the bladder and the urethra, the two stool-carrying ducts with their roots in the anus and the large intestine, the two carrying the 'Menstrual Fluid, and the two 'Semen'-carrying channels with their roots in the breasts and the testes (Su.).

(3) *The Bladder.*—

The Bladder.—The urines of female animals are recommended as medicines because they are free from admixture with 'Menstrual Fluid' (Ch.). Since two canulae, one for the female urethra and another for the vagina were used (Haranchandra), it indicates that the urethra was known to be separate from the vaginal canal; the down coursing channels (*Dhamani*=Ureters) convey urine; there are Vital Points (*Marmas*) in the bladder region (Su.).

Physiology :—

Generative Organs.—

The organism of a girl of 16 years of age is fully developed in respect of the maturity of the seven Root-Principles (*Dhatu*) of the body (Su.).

Exact measurements of the different parts of a body help to ascertain the duration of life of a patient; a person whose parts fall short of the above measures should be regarded as a person endowed with short-life (Su.).

A hurt to the Generative Organs gives extreme pain; a surgeon who is not well conversant with the nature and positions of the Vital Points (*Marmas*) brings about the death of an innocent victim (Su.).

The ducts (*Srotas*) that carry the 'Menstrual Fluid' have their roots in the uterus as well as in the channels (*Dhamani*) which carry the 'Menstrual Fluid'; if these are injured, it brings on sterility, suppression of the menses, and incapacity for sexual act (Su.).

Puberty, Menstruation and the Menopause.—

Menstruation commences at the 12th year flowing once in every month, and continues till the 50th year (or according to some till the 60th year) when it disappears with the perceptive decay of the body. The flow occurs every month for three nights (Da.). It occurs every month and lasts for five nights (Ch.). It flows for three days in a month (Va.); or for seven nights which is the menses period (Ha.).

Though menstruation commences in the 12th year, development is complete only after the 16th year (Va.).

'Menstrual Fluid' is produced from the juices of food, has the properties of blood and is the essential factor which makes impregnation possible (Su.).

The 'Menstrual Fluid,' though originating from Lymph which is of a cooling potency, is heat-making in character (Su.).

Healthy 'Menstrual Fluid' is red like the blood of a hare or Shellac Water, leaves no stain on cloth, and is easily washed off; it flows out odourless and blackish (Su.). Healthy 'Menstrual Fluid' may have the colour of the fruit of *Abrusprecatorius*, or the colour of red *Nymphaea stellata*, or of cotton soaked in lac dye, or of the insect Coccinella (Ch.).

The Fluid is free from mucus; there is no burning sensation, and the quntity of the Fluid passed is neither small nor large (Ch.).

Just as the petals of a full-blown lotus fold up during night, so the Uterus and Vagina (*Yoni*) are folded up after the lapse of a menstrual period. The menstrual flow accumulated during the course of the month is led in time by the local *Yaya* through its specific duct (*Dhamani*) into the mouth of the vagina (Su.).

Signs of Menstruation.—There is a tired but bright expression, throbbing of the waist and breasts, drooping of eyes and the loins, and desire for sexual intercourse (Va.).

Hygiene of the Menstrual Period.—A woman should forego, during this period, the bed of her husband for the first three days; avoid day-sleep and collyrium; she should not shed tears, bathe, anoint her body, pare her nails, run, indulge in loud excessive laughter and talk, hear loud noises, comb her hair, expose herself to draughts, nor do any fatiguing work; she should lie down on a mattress made of *Poa Cynosuroides* grass; should take her food from her own blended palms, or from earthen vessels or trays made of leaves; she should take a course of 'Havishya' diet (a food with ghee, etc., but without meat or fish); she should take a bath on the fourth day (Su). She should not take much of laxative or fatreducing subtances prepared .from milk or millet grain (Va.).

Cauterisation with alkalis should not be done in a woman in her menses, or in one suffering from retroversion, or inversion of the uterus, or prolapse of the vagina (Su.).

Functions of Menstruation.—

Many diseases (*e.g*, baldness, urinary discharges, etc.), do not appear in a woman because many of the deranged Humours pass out of her system through the 'Menstrual Fluid'; while doing so, they aggravate and derange the 'Menstrual Fluid' during the menstrual period and clean her body (Va.), Favourable or unfavourable prognosis of one and the same disease depends, according to the above argument, upon whether a patient is a female or a male respectively (Ma.).

When a woman suffering from fever gets the menses before the regular time, and if these continue to flow, she will probably die (Ha.).

Disorders of Functions :—

I. Normal Disturbances of Menstruation.

(1) DIMINUTION of 'Menstrual Fluid' makes the menses irregular and scanty ; the vagina feels stuffed and painful ; the diminution is due to excessive cleansing, cathartic, or pacifying measures, repression of natural urgings of the body, excessive exercise, amorous excesses, grief, use of nnwholesome and inadequate food, etc. *Treatment* :—Give alterative and cleansing measures, and administer drugs of heat-making potency (Su.).

(2) EXCESS of 'Menstrual Fluid' causes excessive flow and aching of limbs ; voluptuous sensations are stimulated, and there is reactionary weakness ; the menses may smell fœtid, and hæmorrhagic tumours (*Rakta-Gulma*) may appear ; the increase is due to excessive use of substances that primarily contribute to their formation in the organisu. *Treatment* :—Give suitale corrective or pacifying measures, but do not reduce the quantity of 'Merstrual Fluid' to a smaller quantity than that which is found in the normal and healthy state of the body.

II. Disorders of Menstruation.

PRIMARY AMENORRHŒA (Xemomenia ? Congenital Obstruction ?).—Some women do not menstruate at all ; at these periods their face becomes full and lively. Body, face. teeth, and gums are covered with moist and clammy deposit. The woman feels sexual desire and speaks sweet words ; eyes, hair, and belly droop down ; there is distinct throbbing in the arms, thighs, mammae, umbilicus, perineum, and buttocks, indicating that the woman has menstruated (Su.).

SECONDARY AMENORRHŒA, or Suppression, or scanty menstruation is due to the obstruction of deranged *Kapha* and *Vayu* in the passage (of the uterus and of the vagina) ; the menses are thin, scanty, and irregular ; the vagina feels stuffed and painful ; *Treatment* :— Give (1) remedies of such medicinal properties as are found to cause directly or indirectly the formation of blood thus lost (*Nashta-Rakta*) ; thus the fluid returns to normal ; (2) give a a diet of fish, *Dolichos biflorus* seeds, fermented and sour gruel, *Sesamum indicum* seeds, wines, cow's urine, whey, buttermilk, curds and any acid fermented article (Su.).

MENORRHAGIA, METRORRHAGIA (*Asrigdara, Rakta-Pradara, Rakta-Yoni*). It is a disorder due to the blood (*Rakta*) being contaminated by the deranged Humours. The Lymph (RASA) is aggravated by grief, fright, anger; excessive physical labour, exposure to sun and fire; use of pungent, acid, saline, and alkaline food, food of heat making potency, and dyspepsia. This aggravated Lymph in its turn aggravates *pitta* which is imperfectly assimilated; this *Pitta* invades Blood (*Rakta*) which finds an outlet through the upper channels (mouth, nostrils), or through the lower channels (vagina, anus, urethra) (Su.); in a Hæmorrhagic Diathesis (*Rakta-Pitta*) blood may, on account of aggravation of *Pitta* and *Vayu*, find an exit through vagina, urethra or anus; this is cured with difficulty (Va.)

Symptoms:—There is an abnormal or excessive discharge of 'Menstrual Fluid'; it persists long after its wonted time, and it appears at a premature or unnatural period; there is aching of limbs; the flow is painful; and if excessive, there is vertigo, loss of consciousness, dimness of vision, difficulty of breathing, thirst, burning sensations, delirium, palor, somnolence; other *Vataja* troubles like convulsions may set in (Su.).

General Treatment:—The patient should be careful in her diet; the treatment is like that of Hæmorrhagic Diathesis (*Rkta-Pitta*), by means of emetics, purgatives and soothing remedies (Su.). Emetic treatment may be given; there are very few remedies to cure it; emetic is not quite good in aggravation of *Pitta*, which in its turn is aggravated by *Vayu*; this *Vayu* does not become normal by emetic treatment; astringent and bitter remedies increase *Vayu*; therefore drugs of the 'Sweet' group only are advisable (Va.). Give with honey and rice-washings the paste of *Amarantus polygamous* and extract of *Berberis asiatica* (Sha.). Determine first the deranged Humour and then treat with suitable Hæmostatic drugs (*Shonita-Sthapan* group of drugs) (Ch.).

(A) If the RAKTAPRADARA is due to deranged *Vayu*; give (1) powder of sesamum seeds, curds, ghee, treacle, boar's fat, and honey; (2) soup of boar's flesh and *Dolichos biflorus* seeds; (3) curds mixed with sugar, honey, liquorice, and ginger (Ch.).

(B) If it is due to deranged *Pitta*, *give* (1) remedies as for Hæmorrhagic. Diathesis (*Rakta-Pitta*); (2) give all remedies mentioned by Charaka under abortions; (3) give juice of *Batatas paniculatus*, root-stock of the three varieties of *Nymphæa stellata*, *Berberis asiatica*, *Cyperus rotundus*, milk, sugar, and honey; (4) give root of *Amarantus spinosus* ground in rice-washings with honey; (5) give extract of *Berberis asiatica* and lac powder, in goat's milk; (6) MAHA-TIKTA GHRITA—ghee 4 parts cooked with one part of the paste of *Alstonia scholaris*, *Cassia Fistula*, *Aconitum heterophyllum*, *Cissampelos Pareira*, *Picrorrhiza Kurrooa*, *Tinospora cordifolia*, *Trichosanthes dioica*, *Melia Azadirachta*, *Justicia parviflora*, *Fagonia arabica*, *Delphinium saniculaefolium*, *Cyperus rotundus*, *Santalum album*, *Nelumbium speciosum*, *Curcuma longa*, *Piper longum*, *Citrullus Colocynthis*, *Clematis triloba*, *Asparagus racemosus*, *Hemidesmus indicus*, *Holarrhena anti-dysenterica* seeds, *Acorus Calamus*, *Swrtia Chirata*, *Andropogon muricatus*, 'Atarushka,' the three myrobalans, and liquorice, two parts juice of *Phyllanthus Emblica*, eight parts of water ; this ghee is useful also in chronic fevers, hæmorrhages, convulsions, tumours, insanity, etc. ; (7) PUSHYANUGA POWDER—powders of *Cissampelos Pareira*, *Eugenia Jambolana*, *Mangifera. indica* seeds, *Spinacea oteracea*, extract of *Berberis asiatica*, *Cissampelos hernandifolia*, gum of *Bombax malabaricum*, *Mimosa pudica*, bark and seeds of *Holarrhena antidysenterica*, *Ferula asafœtida*, *Aconitum heterophyllum*, *Aegle Marmelos*, *Cyperus rotundus*. *Spmplocos racemosa*, *Myrica sapida*, *Piper nigrum*. *Pterocarpus santalinum*, *Bignonia indica*, *Hemidesmus indicus*, *Woodfordia floribunda*, *Terminalia Arjuna* bark, Red Ochre, ginger, raisins, and liquorice, to which honey and rice-washings are added ; it cures diseases of generative organs, faults of menstruation, menorrhagia with white, blue, yellow, or dark-red discharge ; also piles, dysentery, etc. (Ch.).

(C) If it is due to deranged *Pitta* and *Vayu*, give the paste of the leaves of *Cassia Fistula* and *Feronia elephantum* fried in ghee (Ch.).

(D) If it is due to deranged *Khapa*, give (1) the powders of *Symplocos racemosa*, *Cyperus rotundus*, alum, the three myrobalans, and liquorice, with honey ; (2) the paste of *Melia Azadirachta* and *Tinospora cordifolia* with honey (Ch.)

III. Disorders of the Bladder-

SOMA-ROGA (Diabetes Insipidus ? Pelvic Congestion due to excessive coitus ?). In the appendix of Madhava-Nidana this disease is described and is identified by the commentator as *Tridoshaja-Pradara* ; it appears to be more a urinary complaint (*Prameha*) than leucorrhœa (*Pradara*).

Causes—Excessive sexual intercourse, grief, exertions, diarrhœa. poisoning, the waters of the body are deranged ; they flow out and are discharged by the urinary channels. The waters are called *Soma* because they support the body; and since these waters are thrown out, the disease is called *Soma-Roga*.

Symptoms.—The fluid is clear, limpid, without smell, white; it is excessive and the woman cannot control the urging of passing it out; there is no pain but she is rarely comfortable; the head is relaxed; her mouth and palate are dry; there are fits of unconsciousness, yawning, delirious talk, dry skin, and loss of appetite occur (Ma.)

(*To be continued.*)

Health and Hygiene

THINGS WORTH WHILE KNOWING

THREE GOLDEN RULES

Spend as much time as you possibly can in the open air. Work out a diet system that suits you and helps you and stick to it at all costs. Never let any person come into your life who can get neither pleasure nor benefit from the association.

Three good rules closely followed are better than a dozen indifferently observed.

PHOSPHORUS

Because of the rapid pace we are living, most people are consuming large quantities of phosphorus during mental activity. This is shown by the phosphorus excretions from the body when such men as clergymen manifest weakness on Mondays, and lawyers during a court trial, or men and women undergoing great mental stress. Foods containing the greatest amount of this precious mineral for the body are: Cottage cheese, almonds beechnuts, whole brown rice, whole barley, oats, beans, corn, peas, spinach, tomatoes, lemon and grapefruit.

DR. STOCKDALE'S "PEP COCKTAIL"

The highest powered food known for mental workers, for those who are easily fatigued, lacking in energy, and for those who want to reduce without losing strength while on a reducing diet is as follows:

Prepare cocktail in a sherbet glass with a wide top.

Juice of one orange, juice of one-half lemon, raw yolk of one egg—leave out the white—one teaspoon of strained honey.

Do not beat the yolk. It will be easily swallowed whole, and will not be tasted. Remember, it is important to leave out the white.

This cocktail should be taken one-half hour before breakfast, on arising, for if mixed with other foods at breakfast, the system takes up what it is in the habit of utilizing and discards the valuable chemical element in the cocktail.

Mental workers and those who are trying to build up an absolute tireless energy and physical strength should take two or three of these cocktails a day, between meals.

THE SCHICK TEST

Several children died at one time in Texas, directly as a result of receiving the Schick Test. Legal proceedings were instituted against the company who manufactured the toxin anti-toxin and heavy damages were awarded to the parents of the children. It was claimed in extenuation that the preparation supplied must have been faulty in those particular cases. However, these supplies had all been submitted to the necessary Government tests and had been passed for use.

Here is the important point of the case : The parents were paid in cold dollars for the loss of their dear ones, but was that adequate compensation ? The little ones could never be restored.

A PERFECT DIET

A raw liquid diet is a perfect one. It is all pre-digested food. It is the easiest food to digest and the most quickly absorbed into and assimilated by the human system. On a raw liquid diet, Nature can cure any disease, providing the end is not too near. Upon this diet, Nature can remove all waste products, cleanse the blood and rebuild every organ in the body. Such a diet is Nature's best.

The Fads of the Old Medical System.

———

LIFE AND HEALTH FROM SUNLIGHT.

J. H. Hallberg writes in Nature's Path :—

The old medical system has been exceedingly prolific in the invention of fads. Almost everybody knows something about Mr. Fletcher. who told us we must chew each mouthful of food from 20 to 40 times before we swallow it. Now we are told that this is not right because it tires the muscles which move the jaw and it overworks and strains our salivary glands and it seems that after all there is nothing to Mr. Fletcher's idea but many followed him without particular benefit for a long time. Then we have our morning exercises which still have to prove their beneficial results to the majority. We are told about extracts of glands taken from animals to make up for our own beneficial results to the majority. We are transplanting glands into our body from animals and while all of these suggestions may possess merit in individual cases they cannot be considered applicable to everybody either as a tonic or cure. In the New York Times magazine of Nov. 16, 1930, I read an article entitled "Our Quest for the Fountain of Youth," by Eunice Fuller Barnard, which is well worth your reading because it sets forth intelligently and clearly the fallacy of fads in relation to the well-being of our bodies, and if I may quote from this article the conclusions, in case you should not be able to secure it, the following is of importance :

"Yet out of the mass of fads certain as yet uncontroverted facts stand out as possible guide posts on the road to Health. *Sunshine*, vitamins, fresh air, exercise, mastication in moderation and a calm and optimistic mental attitude are still parts of most accepted hygienic codes as conducive to help, if not to the prolongation, of life." You will note that in the article just quoted, "*Sunshine*" comes first, because it is the foundation upon which all organic matter and health is based and dependent.

More than 25 years ago Dr. A. Rollier of Switzerland discovered that he could cure children afflicted with rickets and also that many forms and cases of tuberculosis could be cured by exposing the sufferers unclothed to the sun rays in the open air.

Some years later Dr. Niles Ryberg Finsen of Copenhagen visited Dr. Rollier's sanitarium and was so impressed with the health building and curing properties of the sun that he decided to measure and photograph the sun spectrum in the Alps where Dr. Rollier was so successful in curing his patients. After he secured his measurements of the sunlight he returned home and constructed special arc-lamps and he found that by using pure carbons in specially constructed lamps he could duplicate the sun rays in the Alps ; but he also found that other rays not in sunlight were present and which were destructive to the skin. This discovery led him to use those destructive rays for the treatment of skin disease and in this he became so efficient and successful that thousands of doctors from all over the world have visited and studied these wonderful methods in cure at the Finsen Institute.

Now through scientific research, invention and development we have suceeded in filtering out the destructive rays which Finsen used for the cure of skin disease and have left the complete duplication of sunlight as required for general body and health building purposes and which are also of great use in the treatment of almost all systemic diseases.

Medical News & Notes

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CHEMICALS IN RADIOGRAPHY.

In the course of an address on "The Use and Misuse of Chemicals. in Radiograyhy," Miss K. C. Clarke, M.S.R., Radiographer to the Royal Northern Hospital, London, said that from the point of view of the radiographer the human body consists of radio-opaque substances, such as bones and non-radio opaque or translucent soft structures. The heart and liver are very opaque, whereas air-filled cavities, like the lungs, are translucent. Normally the intestinal tract and the gall-bladder are invisible to X-rays, and the kidneys are just perceptible to the experienced eye. It is in connection with the radiography of these organs that radio-opaque chemicals play an important part. The best known are bismuth carbonate and barium sulphate, both equally opaque to X-rays, and harmless to the patient. Barium sulphate is more popular, for it is less expensive. The usual dose conists of four to six ounces suspended in a flavoured medium and administered as a palatable "meal," and from six to forty-eight hours are occupied by it in passing through the alimentary tract. Films are taken at varying intervals and ingestion of the meal may be observed by means of a fluorescent screen. Immediately after the meal the outline of the stomach becomes visible and; twenty-four hours later the colon may be seen. When patients are treated with bismuth salts it is usual to give instructions for the omission of the medicine during the three days prior to an X-ray examination, as the shadows caused by the bismuth would interfere greatly with the examination.

Iodine combined with poppy-seed oil forms a smooth, oily fluid which, owing to its opacity and adherent properties, is used to outline cavities of the body, such as the thorax and fallopian tubes. Another form of organically combined iodine, available as Uroselectan or Abrodil, is injected into the vein and is seen ten minutes later outlining such portions of the renal tract as the calyces of the kidneys, the ureters and bladder. The gall bladder may be rendered opaque by sodium tetraiodophenolphthalein. This substance is given in capsules or as a suspension overnight, some twelve to eighteen hours before the examination, or intravenously four to eight hours before the examination. Certain chemicals, chiefly sodium, fluorescein, are used therapeutically in conjunction with X-rays on account of their fluorescent properties.

Face powders, lotions and ointments are frequent causes of trouble in radiography. Zinc oxide is very opaque, and applications as lead lotion, calamine, mercurochrome, Scott's dressing and .ointments of iodine and tar are more or less opaque. Three thicknesses of zinc oxide strappping are sufficient to be noticed in an X-ray photograph. Cold cream, starch, boric acid and vaseline are quite translucent. In X-ray therapy all metallic dressing should be avoided, but when used the area should be carefully cleansed on account of the characteristic secondary radiations obtained when mentals are under the influence of X-radiation. When the maximum X-ray dose is to be applied superficially, metallic ointments may not be applied for seven days prior to the treatment.

Apart from the fact that chemicals are actually employed diagnostically, it is convenient that so many household materials are radio-opaque, for children and occasionally adults are very careless in swallowing articles that were never intended as food. It is not uncommon, for example, to X-ray children who have swallowed coins, safety-pins, tin whistles, nails, etc., and adults with splinters of glass embedded in the hands or feet. The glass not always opaque, but much that is used for cheap bottles contains lead, which prevents the passage of X-rays.

THE INDIAN TRADE.

The report of Mr. Thomas M. Ainscough, His Majesty's Senior Trade Commissioner, on *Conditions and Prospects of United Kingdom Trade in India*, 1930-31, contains, as usual, matter of particular interest to those engaged in the chemical drug and allied import trade of India. The report indicates a considerable reduction in the value of exports from India resulting from the exceptional fall in raw material prices. This reduction, amounting to 29 per cent., as compared with 1929-30, has had a direct bearing upon the course of the import trade, where the reduction has amounted to 31 per cent. The agricultural depression and the lack cf any sign of improvement in general economic conditions prevent an optimistic outlook on future developments. The prices of India's staple products have fallen, and the cultivators' consuming capacity has therefore been seriously reduced. As fully 75 per cent. of the people of India derive their livelihood from the produce of the land, and even in normal times have only a small margin to expend on imported articles, it is obvious that no immediate increase in import trade can be expected. The share of the United Kingdom in the import trade has continued to depreciate. This may have been due in part, during the period under review, to the boycott of United Kingdom goods and their partial replacement by the products of other countries. In many instances the price factor has played its part, and there is a danger that unless steps are taken very quickly to re-establish the competitive power of United Kingdom goods, the valuable co-operation of many efficient distributing organisations may be lost. In the chemicals and chemical preparations trade it is satisfactory to note that the steady advance in imports, which has been a marked feature of recent years has only been slightly retarded during 1630-31, the total imports for this period being Rs. (lakhs) 2.61. The reduction in the United Kingdom share of 3 per cent. is due to diminished imports of sodium carbonate and, to some extent, to the boycott movement in western India. The competition which is being met from the German "I.G.," working through the Havero Trading Co., is becoming increasingly acute. The Havero Trading Co. now undertake the distribution of Russian alkalies, trial shipments of which, at very low prices, have been made to the principal consuming centres. Though these imports from Russia have not yet assumed large proportions, they have had a depressing effect on prices, and have become a disturbing factor in the market. The trade in drugs and medicines (which excludes chemicals and narcotics) has declined, as the following table, in which the principal items are enumerated, shows :—

	1929—30 *Rs.* (*lakhs*).	1930—31 *Rs.* (*lahhs*).
Camphor	32	27
Asafœtida	1	2
Codliver oil	1	1
Proprietary and patent medicines ...	49	43
Quinine salts	29	23
Other sorts	1,14	98
Total imports of all kinds	2,26	1,94

The imports of camphor were largely shared by Germany and Japan. Asafoetida is obtained exclusively from Persia. Codliver oil is mainly obtained from the United Kingdom with lesser quantities from Holland and Germany. The valuable trade in proprietary and patent medicines in 1929-30 was divided between the United Kingdom (50 per cent.), Germany (15 per cent.), United States (13 per cent.), France (10 per cent.), Italy, Holland and Norway. Of the quinine salts, the United Kingdom supplied 52 per cent., Germany 29 per cent., Java and United States 4 per cent., and Holland 3 per cent. Of the total trade in drugs and medicines in 1929-30 the United Kingdom contributed 42 per cent, Germany 18 per cent., Japan 12 per cent., United States 10 per cent., and France 6 per cent. A boycott of United Kingdom drugs and preparations was experienced in the Calcutta and Bombay markets during the summer and autumn of 1930, which has had some effect on the imports during the year. Conditions at the time the report was compiled had greatly improved, however, and principal difficulty now experienced is the general stagnation and lack of confidence. Mr. Ainscough again emphasises that United Kingdom manufacturers suffer most from the lack of a Pure Food and Drugs Act in India, as their competitors are able to compete with drugs which do not come up to the standard of the British Pharmacopoeia, and for which there is no standard quality. This report on Conditions and Prospects of British Trade in India should be studied by all who are interesed in the Indian market. It is issued by the Department of Overseas Trade, and published by H. M. Stationery Office at the price of 3s. 6d. net.

—*Indian and Eastern Druggist.*

TOO OLD AT FORTY?

In a famous address delivered in Baltimore in 1905 Sir William Osler declared that he had two fixed ideas : the comparative uselessness of men above forty years of age, and the total uselessness of man above sixty. Osler was a great man whose speeches were widely read.

For weeks the phrase "Too old at forty" filled the Press and was discused everywhere. 'Take,' he said, "he sum of human achievement in action, in science, in art, in literature—subtract the work of the men above forty and while we should miss great treasures, even priceless treasures, we would practically be where we are to-day.'

One thought at once of Alexander the Great and Napoleon, of Shelley and Keats, and allowed the remark to pass. But at best it is a half-truth. Osler was thinking chiefly of pioneers of medical science and instanced Vesalius, Harvey, Hunter, Virchow, Lister and Koch.

If we apply this statement to men of science of the nineteenth century —the classical age of scientific discovery—it is demonstrably unture. I once heard a man put forward the theory that every number less than 12 divides it without remainder. He said that the dividend must at least be 2, a remark which was uncontradicted by his audience, largely because they were not sure of what a dividend in that connexion was. Accordingly, said the theorizer, no divisor greater than 6 is admissible. He then pointed out that 1, 2, 3 and 4 divided 12 without ainderrem. Beginning at the other end he continued, 6 also divides 12 without remainder. He then had to catch a train and had no time to finish his demonstration. But as 1, 2, 3, 4 and even 6 had done as he had postulated, he assured his audience that, had time allowed, he could have proved his point for 5 too.

Transpose this kind of argument into a medium where we cannot immediately see the snag and a theorizer can go a long way. Osler's argument is in this category (writes Professor A. S. Russell in *The Listener.*)

GIANTS OF SCIENCE.

Let us glance at the nineteenth century giants of science. Darwin was fifty when the *Origin of Species* was published. We had better rule him out, however, as he developed late ; he was dull both at school and at Cambridge ; moreover he must have had the root of the matter in his mind for years. Faraday made his discoveries mainly between thirty and sixty-two. They were most of them remarkable. The biggest of all—its centenary was celebrated last year—was made when he was forty, but the later work was at least as important as the earlier.

Sir William Crookes, hardly less great than Faraday, if the importance of the subjects which arose from his pioneer researches is a measure of greatness, was as good at seventy when he did his chemical work on radioactivity as at fifty when he discovered the 'fourth state of matter," or as at thirty when he discovered the element thallium. Rontgen was an old man when he found the X-rays. Planck was over forty when he first thought of the Quantum Theory. During the first great period of the Cavendish Laboratory, when the electron and gaseousions were isolated, the Master of Trinity was between thirty-nine and forty-four. Clerk Maxwell published his great work on electromagnetism when he was forty-two, only six years before his death, and Jenner his work on vaccination when he was forty-seven.

SOME EXCEPTIONS.

On the other hand two of the pioneers of 'wireless' on the experimental side did their great work early. Heartz was only thirty when he generated the first wireless waves, and Marconi only twenty-two when he took out his first patent. Very young, also, were some of those who made great scientific advances as mathematicians. J. C. Adams found the planet Neptune by his computations before he was thirty, and Fitzgerald was just over that age when he made his mathematical contributions to electromagnetic theory. The present exponents of quantum theory and wave mechanics in atomic physics, Dirac, Hoisenberg, Fermi, Gamow, and de Broglio, are all young or very young men.

There is no point, however, in multiplying instances. I am not concerned to demonstrate the opposite of Osler's position. I am concerned to show that there is no generalization which can stand up to the facts. What does emerge from ages and dates in nineteenth century science beyond the fact that discoveries were made by young and old, is the longevity of the great men.

YEARS OF PLENTY.

I find that the average age of the sixty-five presidents of the British Association who are no longer alive is seventy six equal to that of the much smaller number of British Prime Ministers since Lord Derby's day. When one thinks of men of the past like Kelvin, Darwin, Crookes, Faraday, Emil, Fischer, Helmholtz, Pasteur, and of our own day like Sir Joseph Thomson, Professor Einstein, Lord Rutherford, Professor Willstatter, Sir Frederick Gowland, Hopkins and Professor Elliot Smith, it is absurd to look for any correlation between their work and their age. Especially is this true of experimental physicists and organic chemists. Like the younger Pitt and Macaulay they seem cast. They start off at twenty-four or twenty-five fully mature ; they are going as strong as ever at sixty-five or seventy-five.

You can argue, if you like, that it was their genius at twenty-five which led them to the work which absorbed them for the next forty years and there is of course a special delight in the freshness of morning, in 'those fifteen golden years of plenty, as Osler put in between twenty-five and forty, but the point is hardly more than an assertion that twenty-five comes before forty.

A comparison of the ages when the great scientists of the past made their big discoveries with the corresponding ages of men of the nineteenth century is probably one that should not be made. Circumstances are so entirely different. Discoveries then were easier in the sense that all the obvious things had not then been found out, but harder through lack of laboratories and instruments. And certainly publication of what had been found was then often very greatly delayed. Nevertheless, if one performs this office for the great men of the 'century of genius' 1600-1700, no great support for the thesis that men matured earlier in those days is found.

Wiener Klinische Wochenschrift,

Priv. Doz. Oskar Stracker,

"Zehendeformitaten (Deformities of the toes).

Dr. Stracker discusses the different forms of toe-deformities, their etiology and their treatment. In cases of chronic inflammation of the metatarsophalangeal joint of the great toe, the author calls attention to the possibility of this condition being easily mistaken for arthritis. For its treatment he recommends massage and diathermy, and internally urecidin. In acute onset, local antiphlogistic treatment with Antiphlogistine proved of great value. To lessen the pain when walking, it is recommended that two strips of wood, placed at right angles, be attached to the sole of the shoe in the area of the ball.

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THE USES OF IRON IN MEDICINE

BY

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Metals are beginning to play a more and more significant role in therapeutics. Silver and its compounds, both organic and inorganic has found its proper place in the treatment of gonorrhea, gold and its salts has many advocates in the treatment of skinl esions, manganese, copper, iodine, and quite a few others are constantly being employed by physicians throughout the world. One of the most useful and one of the oldest in length of service to man is iron.

When iron was first used, the reasons for its use were based on mysticism and empyricism ; no scientific explanation was attempted for its indications. It was used in its crudest form, the first person probably to have prescribed iron was Melampus, the ancient Greek physician, whom his countrymen believed to have been the first mortal to have practised healing. The form of iron he prescribed was rust. Later on physicians began to prescribe iron in the form of drinking water in which the "glowing iron is quenched in the smithies." A crude method, but probably effective after a fashion, for it persisted for quite a length of time.

The earliest scientific evidence for the use of iron was the discovery by Menghinis in 1846, that iron was a normal and characteristic constituent of the blood. Menghenis also found that a diet rich in iron caused an increase in the iron content of the blood. In 1832, Foedisch found that patients suffering from what was then a rather common blood ailment, chlorosis, had a much lower content of iron in their blood than normal people. Ten years later Andral, Gavaret and Delafond found that whenon ir was fed to these patients suffering with chlorosis there was an increase in the number of red cells and a perceptible improvement in the patient's condition.

After these scientific contributions to the question of iron as a medicine there was much controversy, particularly during the years from 1890 to 1905 as to the absorption and utilization of different forms of iron, centering chiefly on food iron complex organic compounds and inorganic iron salts.

With regard to food iron there can be no question as to its absorption and utilization. During the early growth period of man and animals in which there is a rapid development and extension of the various tissues, the hemoglobin increases satisfactorily on an adequate diet. Among the foods rich in iron, spinach is recognized every where as one of the most valuable.

As regards inorganic iron, the experimental work of such men like Macallum, Hall, Quincke and Gaule showed, by microscopic examination of the intestinal tract, that inorganic iron salts were absorbed mainly in the upper portions of the small intestines. Gaule also demonstrated the absorptions of iron by administering a 0·06% solution of ferric chloride by stomach tube and proving by chemical tests the presence of iron in the lympth of the thoracic duct three-quarters of an hour later. Additional evidence of the absorption of inorganic iron was obtained by Hoffman and Rabe who used both man and animals as experimental subjects, and made quantitative comparative studies of the iron ingested and excreted.

Kunkel, Cloetta and Aberhalden proved by animal experiments that inorganic iron salts were absorbed, stored and subsequently untilized by the body for the formation of hemoglobin. The work of Tartakowsky confirmed the above findings and indicated that in addition to their utilization for the formation of hemoglobin, inorganic iron salts had a pronounced stimulating effect upon the blood in forming organs, especially when the hemoglobin was at a low level, as was found in chlorosis

At the time when it was believed that the inorganic iron salts were not absorbed, various organic iron compounds were extensively used. With the definite knowledge that inorganic iron salts are absorbed and utilized for building hemoglobin, the use of iron compounds has been practically abandoned.

Since approximately 80% of the total iron content of the body is contained in the hemoglobin it is evident that during the growth period there is a great demand for iron to meet the rapid increase in hemoglobin formation. The usual food of man is not particularly rich in iron. Sherman in 1907 made an extensive study of iron metabolism and found that the average daily intake of iron was 11 to 19 mgs. In deficient diets or where the appetite is poor the iron intake may fall to as low as 4 mgs. The quantity of iron excreted in the urine and faeces is almost equal to the intake. Studies made on two professional fasting subjects, Cetti and Breithaupt, showed a daily excretion in the faeces of 7 and 8 mgs. respectively. It is therefore quite evident that under the most favourable dietary conditions the amount of iron derived from food is barely sufficient to cover our physiological demands ; i. e. to provide for the catabolic losses, and does not allow any excess for the replacement in disease. In addition to the actual physiological needs for iron, it would appear that this element has in large amounts a divided stimulating effect upon the blood forming organs and upon metabolic processes in other tissues.

Many different forms of iron have been used orally and hypodermically for many years in the treatment of anemias. As a general rule, the results have been disappointing to both patient and physician. Recent clinical work, however, definitely shows that previous failures in the treatment of many of the cases of secondary anemia have been due in large measure to inadequate doses of iron. In 1926 Goodball advocated the use of large doses of iron in the treatment of secondary anemia. He regarded the massive doses of iron not so much as a supply of iron but more as a stimulus to the utilization of iron, *i. e.* to the formation of certain substances necessary for the production of hemoglobin.

There are various forms of iron for oral and intravenous administration. Among the most commonly used are ferric oxide, ferrous carbonate and reduced iron and these require an acid before they can be absorbed and this is furnished by the free HCL which is normally present in the stomach. The disease in which iron is most often indicated of course are the anemias, primary and secondary, and quite often there is no free HCL in the stomach in patients suffering with these diseases. Consequently in these diseases the greater part of these water insoluble iron compounds are not absorbed. This point was emphasized by the negative results of Hart, Elevenjem, Wadell and Herring using ordinary iron oxide, and by Doan, Sabin and Folkner using the magnetic ferric oxide prepared by Baudisch. Like-wise the experimental work of Mitchell and Schmidt indicates that the more soluble the iron salt and, therefore, the more avilable for absorption, the more pronounced is its therapeutic effect.

Many iron compounds such as ferric chloride and ferric sulphate exhibit a marked astringent effect upon the gastro-intestinal mucosa, and if repeated for a long period, strong astringent tends to impair gastric secretion and retard absorption. Of the iron compounds, perhaps the most desirable from the therapeutic point of view is ferric ammonium citrate which possesses to a minimum any of the undesirable iron complaints.

Many physicians have been using iron and copper combinations in pernicious anemia with good results. This has been found to be a valuable reinforcement to the liver diet prescribed in this disease. Some benefit is always sure to be derived from some form of iron therapy in any of the blood diseases because iron is so important a constituent of the red blood corpuscle.

Iron has always been a symbol of strength, and from earliest times iron in some form has been a popular medicine for patients in a run-down condition. Preparations of hemoglobin with iron as a reinforcing agent has been popular in former times and is now becoming popular for poorly developed children and adults. The astringency of certain iron preparations is taken advantage of in the use of iron as throat gargle and as a styptic. As a local application,. it has been used in the form of Liq. Ferri. Chlor Fortis in painting the scalp in ringworm.

There is but little doubt that iron is one of the most valuable drugs in the materia medica.

Original Articles

THE PATHOLOGY OF PSYCHO-SEXUAL IMPOTENCE IN MEN & WOMEN

BY

LIEUT COLONEL OWEN LERKELEY HILL, L. M. S., (RANCHI)

ALTHOUGH a large number of studies of the psychology of sex existed prior to the advent of the psychoanalytical school of psychology, it is to this school above all others that we are indebted for its most exhaustive and illuminating researches into this aspect of human relationship.

First, psychoanalysis has done more than any other branch of psychology to shew us that the sexual impulse of mankind does not as was formerly supposed spring forth ready-made, so to speak at puberty, but is the product of an elaborate neuro-psychic organisation which begins to develop in the early years of the life of the individual. Further, psychoanalysis has shewn that this elaborate organisation is frequently liable to a variety of interruptions, retardations and deflections in the course of its growth, and among the manifold vicissitudes to which it is liable the most important as the most far-reaching is that known as the "castration complex." This complex is characterised by a state of fear and anxiety over the loss of the penis and in the case of the male is often the outcome of actual threats experienced during childhood that the penis will be cut off as a "punishment" for touching it, or for behaviour that might give rise to the idea that the child entertained an "improper" (sexual) interest in his mother or sister. While this threat is fairly common, especially towards Indian children, it is important to note a castration complex can be detected in individuals to whom no such menace ever befell but came into existence as a product of the child's own imagination which had been stimulated by hints and allusions as well as by the discovery that some children *e g.* girls, have not got a penis. That the castration should exist in women as well as in men may appear to many who are unacquainted with the findings of psychoanalysis as an almost incredible fact but a superfical acquaintance with psychoanalytical psychology is sufficient to demonstrate to any but the most bigoted, that this complex is almost as common with women as it is with men. This complex arises when the girl child discovers she has not got a penis which leads her naturally to conclude that she had one but has been robbed of it. Later on, as a consequence of this idea there supervenes the notion that the external female genital is a *wound* produced by the castration.

I will now proceed to consider shortly the more important repercussions of the castration complex upon the sexual life of the male, namely *psychic impotence and ejaculatio praecox.* For a proper understanding of the former of these two disorders I cannot do better than quote Freud's own words on the subject. He writes: "This strange disorder affects men of a strongly libidinous nature, and is manifested by a refusal on the part of the sexual organs to execute the sexual act although both before and after the attempt" they can shew themselves intact and competent to do so. and although a strong mental inclination to carry out the act is present. The man gets his first inkling in the direction of understanding his condition by discovering that he fails in this way only with certain women, whereas it never happens with others. He knows then that the inhibition of his masculine potency is due to some quality in the sexual object, and sometimes he describes having had a sensation of holding back, of having perceived some check within him which interfered successfully with his conscious intention. What this inner opposition is however he cannot guess or what quality in the sexual object makes it active......the disorder is in fact due to the inhibiting influence of the certain complexes in the mind that are withdrawn from the knowledge of the person concerned."

Now psychoanalytic studies of psychic impotence have led to the general acceptance by psychoanalysts of the conclusion that the main factor in the genesis of this disorder is the failure of the individual to surmount the infantile love attachment to the mother or sister. In other words, whenever the love object (usually the wife), can function in the unconscious as a mother or sister-image, the situation immediately raises the incest barriers and impotence supervenes. We may now consider what may be regarded as a variant of psychic impotence, namely, ejaculatio praecox. This disorder is well known not only to the medical profession but to the laity, and is characterised by an emission of semen immediately after, though some times even before, intromission of the penis, and is followed by an instantaneous flaccidity of that organ.

Although the psychological content of this disorder has received a good deal of attention, its exact etiology is still far from precise. The most important contributions to our knowledge of the subject have been made by Freud, Sadger and Abraham, and it is to the observations of the last named that I propose to refer in the considerations that follow.

As Abraham has poined out, the usual description of ejaculation praecox is incomplete in various ways, for little or no emphasis is laid on the fact that patients who suffer from the disorder usually complain that the usual rhythmical expulsion of semen is replaced by a single outflow which gives the whole proceeding a remarkable resemblance to the act of micturition. Ejaculatio praecox can thus be looked on as a combination of the two processes, it is an ejaculation with regard to the *substance* of the emission but a micturition with regard to the *manner* of it. A psychological examination of these patients reveals the fact that they have always had undue pleasure in the act of micturition but at the moment of emission of semen they experience a feeling of shame associated with anxiety and palpitation of the heart. Ejaculatio praecox therefore takes place against the person's will and is comparable to the involuntary passing of urine in the infant. Further, in such patients there is invariably a history of enuresis which persisted to an advanced age of child-hood, sometimes nearly up to adolescence. An intensive psychoanalytical investigation of such cases further demonstrates that the genital zone has never become the primary zone in the sexual act. As might only be expected, such persons suffer severely from feelings of insufficiency through realisation of their defective musculinity, and in view of the fact that the treatment usually meeted out to them only tends to aggravate the condition, they may even seek relief in suicide. In many cases the surface of the glans penis lacks excitability, while in others the slightest genital contact with the female body is enough to evoke a precipitate flow of semen. This latter situation might appear to refute the argument that in these patients the genital zone is not the primary one but such over excitability is no indication of the primacy of the genital zone—on the contrary it is an expression of its weakness. The specific male genital function—erection, intromission, friction of the female parts, are completely absent. Indeed even before erection has begun a flow of semen may take place. Then again besides, a deficiency of genital sensitiveness, there frequently exists in these patients a particular erotogenic state of the perineum and posterior part of the scrotum, so that what pleasurable sensations are experienced are felt only in the perineal portion of the urethra. There is however one fact of importance to note and that is that persons who suffer from ejaculatio praecox do so when attempting coitus but never when masturbating. Hence we are bound to conclude that it is the presence of the woman which occasions this neurotic disturbance. It is therefore necessary to pay some attention to this aspect of the disorder.

Abraham divides persons who suffer from ejaculatio praecox into two groups, namely, men whose individuality seems to be inert, without energy and passive, and men who go bustling through life and always seem to be in a hurry about everything so that they look on coitus as a troublesome affair to be got through as quickly as possible. To correlate those two apparently antagonistic types is not so difficult as it might appear, for as Abraham observes, the neurotic who does everything in haste is feeling from the unconscious resistances within him ; he has to carry out his projects in a feverish hurry before his resistances break through and compel him to renounce all. On the other hand, the inert neurotic has given up the struggle against these forces : the bustling neurotic is still fighting against them. The tendency to be quarrelsome and to commit violent acts is very marked in the latter type, provided that they are not paralysed by another character trait which distinguishes them, namely, cowardice.

Both types, however, have one important reaction in common, and that is a feeling of horror for the female genital organs. The lack of the penis in the female evokes in both the unconscious dread of castration. Closely related to this anxiety is another one, namely that of losing the penis through the sexual act itself. The patient fears he will never be able to withdraw the penis and must leave it inside the woman. This anxiety about the safety of the penis furnishes an additional explanation why desire and erection disappear at the moment of intromission, although up to that moment both desire and erection may have been present to a normal degree. The unconscious dread of losing the penis makes the patient seek safety at the last moment with result that this unmanly fright arouses in consciousness the most tormenting feelings of shame and inferiority. It is possibly to compensate for this feeling of inferiority that many of these patients consider their defect to be due to an unduly passionate nature or to a temperament that has reached a point of refinement superior to that usually reached by their coarser fellow men.

We may now pass on to the consideration of sexual *frigidity* in women and its variant, dyspareunia.

As I have already pointed out, the castration complex in women arises from the childish belief that girls once had penises like boys but someone cuts them off, and that the external genitals of women are 'wounds' resulting from this mutilation.

Most of us are aware that many women suffer either temporarily or permanently from the thought they have not been born men, but psychoanalysis can shew that the desire to be born a man exists in the unconscious of most women.

Perhaps the first psychic trauma of importance in the life of every woman is the discovery that she cannot direct the flow of her urine like the male can and the feeling of inferiority to which this discovery gives rise inevitably leads to a feeling of envy towards the male which, in turn, arouses a desire to deprive the male of what he possesses—his penis. In the neurotic woman this envy and the desire to rob the male of his penis find expression in two ways. In one the psychic phenomena rest on a strong but unconscious wish to adopt the male role, that is, they indulge in the phantasy of possessing a penis. In the other group, the ideational content of the castration complex expresses itself in an unconscious refusal of the female role and a repressed desire for revenge on the privileged man. There is no definite line of demarcation between these two types, so that one may meet with the phenomena of both in the same individual. The psychical manifestations of the desire to be a man as well as from the desire to be avenged on the man, are not easy to catalogue on account of their multiplicity, but vaginismus is the most important of the neurotic symptoms which subserve the repressed phantasies of castrating the man. The purpose of vaginismus is not only to prevent intromission of the penis but also, in case of its intromission, not to let it escape again *i. e.* to retain it and thereby castrate the man.

Women of this type often display a dread of marriage and a psychoanalysis of this dread may disclose as its cause the anxiety that the woman might have to do "something dreadful" to her husband. A patient of mine whose neurosis was motivated by an intense penis-envy, told me that during coitus with her husband she enjoyed passing a quantity of flatus for the act gave her the feeling that she could thereby "blow him to pieces"

This type of anxiety often prevents the subject from having intimate relations with the other sex on account of the opportunity such relations would offer to carry out the unconsciously intended castration. At times it is possible to meet with cases in whom the aggressive tendencies are transferred from the idea of robbing the male of his organ to the idea of depriving the organ of its potency. Another modification of the 'robbing' and of the "revenge" impulses is the idea of *disappointing* the man, *i. e.,* to excite expectations and not to fulfil them. Such behaviour is most significantly expressed in *frigidity.* If we penetrate into the deeper psychic layers of the frigid woman, we can see how powerful is the desire to dominate the male. In women of this type, there is little or no sexual excitability in the vagina—the excitability lies in the clitoris, the homologue in the woman of the male penis. A manifestation of frigidity motivated by the wound is the willingness shewn by some women to allow sexual relations with men provided her own genital organ is excluded from the act. Thus oral and anal perversions in women are to a considerable extent, explicable as effect of the castration complex. Thus, to disencourage as far as possible her husband having genital intercourse with her, a patient of mine always went to bed in her drawers. This same patient was obsessed with a constant dread of having her posterior vaginal wall torne through during coitus so as to leave her with a huge recto-vaginal cloaca. It is not unlikely that dyspareunia is motivated by phantasies similar to this description which are, of course, based on infantile phantasies of coitus with the father whose penis appears so huge to the child as to be capable of producing such an injury.

I will now conclude this short and inadequate summary of the principal features of psycho-sexual impotence in the male and female, with a word of warning. As I have tried to shew these disorders are psychic disorders and for this reason can only be arrested or cured by psychic means. In a paper I read before this section last year, I did my utmost to emphasise that the chronic failure of doctors to ameliorate far less to cure, many morbid conditions is, in my opinion, mainly due to the fact that their training has been such as to lead them to ignore the mental factors in the causation of disease. In perhaps no diseases do the mental factors exert a greater influence than in disturbances of the sexual function. Yet, all round us, it is possible to observe the general practitioner, the consulting physician and perhaps most of all, the gynecologist pursuing what he imagines to be his calling in a state of complete indifference to the part played by the mind in relation to every sort of ailment. So long as this condition of affairs in the practice of medicine is permitted to exist, so long must we doctors remain the unwilling spectators of our patients leaving us to seek alleviation for their troubles at the hands of the charlatan and the quack.

APHRODISIACS IN AYURVEDA

BY

A. RAMAN,

AYURVEDACHARYA, (A. I. A. V.)

Some of the simplest and most efficacious vajikaranas (Aphrodisiacs.)

1. Powder the Root of *Vidari* (The Solanum jacquini), put it in the juice of the leaves of the same plant, dry it up in the sun and take it daily with honey and ghee.

The prescription enables the man to conquer a large number of women in succession.

2. Remove the nut of *Amalaki* (Phyllanthusemblica). Powder it well, soak it in the juice of the same fruit, expose it to the sun until dried and take it with ghee, sugar and honey at night.

After taking the medicine for some time even the old will feel just like the youth.

3. Soak *Mash* (The well known Pulse Mung) in cow's milk and sugar, expose to the sun to dry ; powder it, knead into a cake, fry it in clarified butter and take it every morning.

Though the person is smitten with years he will feel the strength of a young man and he will be able to enjoy numerous women.

4. Loha Bhasma (A preparation from the oxide of iron), Powder of *Triphala* (The three myrobalans) and *yastimadhu* (Glycerrhiza glabra) to be taken with honey and ghee every night.

The result will be the salocity of a sparrow—a bird that enjoys many females in succession.

5. Take 10 Mashas (150 grains) of the inner bark of the Tree (Bassia Latifolia) with ghee and honey followed with cow's milk for a considerable time.

The result of the above medicine will be that the person will be strong enough to enjoy a number of women in succession.

6. Take the powder of the seed of Tal-makhana and that of the Sastika Rice (the Rice is extensively prescribed in the Ayurvedic system of medicine), each 10 Mashas with honey every night.

The result will be that the man will possess a great amount of vigour and strength.

7. Mix equal parts of the juice of Rosa Glandulifera squeezed from the flower and ghee, boil it with 10 parts of milk and take it with honey and sugar daily.

The result will be marvellous.

The above prescriptions are found in "Ananga Ranga"—one of the reputed books on sexual science of the Easterners and also some of the drugs of the prescriptions are stated by the sage Charaka in his works as rejuvenating and aphrodisiac. Therefore, we should consider the efficacy of the medicines without any doubt. Besides this, I had some opportunity to try some of them on my patients, and I have found them very very efficacious. But as far as my experience goes, the administration of the medicines for less than a fortnight is not sufficient for the desired effect.

The longer the person takes it, the more is the effect; and also many of the drugs play an important part in health and happiness. The beauty of the prescriptions lies in the simplicity and cheapness and so they are accessible to the rich and poor alike.

THE ARYAN EMBRYOLOGY

BY

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(Continued from a previous issue.)

THE POSITION ETC. OF THE FOETUS. The description given by Charaka with respect to the adaptation of the fœtus to the uterus viz* that the foetus remains in the mother's womb with its face turned towards the back of the mother with its head upwards and with all its limbs flexed and enclosed in a bag of skin (Amniotic Sac) suggests that the child is usually presented by its breech and the usual lie is of the longitudinal nature and the attetude is that of the universal flexion and the position is either the Left Sacro Anterior or the Right Sacro Anterior.

PHYSICAL DEVELOPMENT OF THE FOETUS. On the first day of conception *i. e.* as soon as the paternal and maternal neclei have fused, the ovum appears like a bubble. After seven days of conception, the fused cell takes the form of a small round ball (Morula Stage) and then of an inflated bag (probably the blastocystic stage).

On the tenth day, it is red like blood.

On the fifteenth day solidifies a little and, resembles small piece of flesh by the twentieth day.

By the twenty-fifth day all the elements are originated in it and the gradual development of the ovum begins in an unconceivable manner, as the Moon enlarges in size, and is only a turbid compound of all dhatus. By the end of the first month, it looks like a jelly mass. Certain limbs are made of subtle matters and certain others of gross matter and the ovum is animated with Prana and sex is not identified.

In the second month, the jelly mass becomes thicker in consistency and many take either the form of a roundish lump, or of a long flat piece of flesh or of a ball according to the nature of its sex as determined by Purusha residing in it. (The Sex differentiation takes place only after the entrance of Jiva.)

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* It is curious to note how the ancient Hindu obstetricians erred in this respect inspite of all their correct and systematic descriptions of other topics on the subject but only in one scripture it is mentioned that the foetus lies with its head downwards.

During the third month, small protruberances at the places where the upper and lower extremities and the head are to be originated, make their appearance while the minor organs will be budding out in the shape of minute papillae.

All the limbs of the fœtus are developed as a result of the heat that resides in the navel region of the embryo being enlightened by the bodily Vayu which ultimately expands all the channels in the body of the embryo in the upward, down ward and latteral directions giving shape to them like a potter giving shape to a mass of clay upon his turning wheel.

In the fourth month, the fœtus becomes more compact and all the organs become more potent. The heart is fully developed. Hair appears.

In the fifth month, the growth is greater and hence the mother becomes weak and lean.

In the sixth month, the growth is still greater than in the previous months in respect of strength and complexion as a sequence of which the mother suffers a diminution of both. The foetus begins to throb.

In the seventh month, the fœtus aquires all the characters of the human being, all the members of the body being fully developed, and it puts on weight.

In the eighth month, digestive fire is originated in the foetus and both the foetus and the mother will be drawing one from the other the principle of Ojas through their communicating channels as a result of which the pregnant woman becomes joyful and gay at times, uneasy and depressed at other times.

During the ninth month it is active.

PSYCHOLOGY OF THE FOETUS.

During the first month, the embryo is animated with Purusha who will be in a state of syncope.

In the third month, the foetus experiences pleasure and pain and if an injury be done to the mother or she suffers in any way, the foetus also suffers in a like manner.

In the fourth month, it recieves its active powers and is endowed with consciousness and desires for the assistance of senses and activity and begins to act as in its previous state of life and hence it expresses its longings to be gratified through the mind of its mother.

In the fifth month, it is endowed with mind and wakes up from its long continued subconcious slumber.

In the six month, it is bestowed with Budhi (cognition).

During the eighth month it will at times be joyful and gay, in other times uneasy and depressed due to the repeated giving and taking process of the ojas by the mother.

During the ninth month, mind and memory are active and the foetus is vexed with its intra-uterine life.

During the tenth month, the foetus aquires knowledge and it is a popular belief that it prays to God aud sees the seven superior worlds above, the Earth and the inferior worlds below.

Instance of foetal Vagitis utirinus has been described in the epics of Hindus in connection with Indra entering the womb of Aditi and cutting the foetus inside into seven portions and when it cried he stopped it saying "मारुद मारुद" but medical scriptures are to the idea that foetus does not cry, its throat being blocked up by kapha.

THE FOETAL METABOLISM. } It has been described that the foetus bereft of thirst and hunger relies upon the mother for its sustenance and that whatever the mother takes as food and drink is conveyed by her juice-bearing ducts to the foetus through all of which the juices ooze out which contribute to the production of the strength and complexion of it (therefore it is ordained that a pregnant woman should never indulge in food or practices that are deleterious to her child in the womb). The foetus thus after assimilation excretes through the mother and does not defecate or urinate by itself in the uterus as it is covered all round by membranes, etc.

THE PATHOLOGICAL CONDITIONS OF THE FOETUS. } Reasons of various diversities have been mentioned in previous topics regarding the pathological conditions of the foetus as governed by influences of Sukra, Artava, mother's conduct during her menstrual and pregnant periods and above all by its dynamics of acts of the previous existence. Atrophy of the foetus is attributed to the blockage of lymph supply to the foetus as well to the bad nourishment of the mother due to deranged Vayu etc. Death also may be produced by the same causes if early treatment is not resorted to.

BIRTH OF THE CHILD. } This is functioned by Apana Vayu and during the tenth month of gestation, and it is, in course of time, severed from its mother and is expelled out of the uterus, as a fully matured fruit is naturally severed from its pedicel and drops to the ground and not otherwise. The foetus may be expelled from its mother's womb even before its natural time in a manner as a fruit worm attacked or shaken by the wind or a blow untimely falls to the earth when it is termed abortion and miscarriage etc. At full term thus the foetus being expelled out of its mother's womb becomes insensible to everything and forgets all its former knowledge and begins to cry as if it is a sign of having lost its so many pleasant illusions of its uterine world and from this time the child becomes an independent individual with its independent physiological phenomenon.

UNIVERSE AND MAN COMPARED. In the beginning it is stated that by the ancient Rishies, man has been recognised as a microcosm of the external universe and an analogy is drawn between the two, each corresponding to the other, in their various aspects as under.

	In External Universe.		*In Man.*
	Brahma	Corresponds to	The Inner Self.
Primary Elements.	Earth	,,	Physical body (form)
	Water	,,	Liquid Secrections
	Heat	,,	Animal heat
	Air	,,	Life breaths
	Ether	,,	Hollow places
	Prajapati (manifestation of Brahma)	,,	Mind (manifestation of Inner Self)
Qualities.	Indra	,,	Consciousness
	Aditya (Sun)	,,	Adaua

	EXT. UNIVERSE		IN MAN.
Qualities.	Rudra	Corresponds to	Wrath
	Soma	,,	Cheerfulness
	Vasus	,,	Pleasure
	Aswins	,,	Beauty
	Marut	,,	Exertion
	Viswadevas	,,	Organs of knowledge
	Darkness	,,	Ignorance
	Light	,,	Knowledge
	Heaven	,,	Uterus of the mother

Time.	Krita Yuga	Corresponds to	Infant Period
	Treta Yuga	,,	Youth Period
	Dwapara Yuga	,,	Manhood
	Kali Yuga	,,	Decadence or old age
	Pralaya (termination of yugas)	,,	Death

Thus man has been compared to the external universe possessing all its attributes.

DEATH OR DISSOLUTION. The child having born and possessing all the attributes enumerated and successively passing over the four stages of age, viz. boyhood, youth, manhood and old age should one day, after the advent of pain or decay with imperfect metabolism in every respect, ultimately terminate after the completion of the purpose of his advance into the external world by* natural death all the functions of the machine having become weaker and disordered finally to cease completely thus making room for his successors who in turn repeat the same cycle of events and perish likewise when all the six ingredients that compose the man, viz. Earth, Water, Fire, Air, Ether and Soul seperate from each-other, the Jiva or soul disappearing and the life-breaths stopping, probably to be born again in accordance with the resultant fate or fortune of the acts done by him in that existence. The phenomenon of the dissolution signifies to the external Universe also when it is said as Pralaya at the closure of Kaliyúga.

Thus closes the final chapter in the eventful mysterious history of Man and Universe.

Chief References.

1. Susruta Samhita.
2. Charaka Samhita.
3. Vagbhata.
4. Garbhopanishad.

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* As opposed to accidental suicidal deaths.

Erratum :—An error has crept in January, 33 issue in the self same article. Please read "As in Binovular Variety in which case they develop from two separate ova coming from each ovary or both from one ovary" in place of "As in Binovular Variety in which last they develop from the fertilization of an ovum with two nuclei."

Editor.

ABOUT MEDICAL ETHICS

DAN RIGHER WRITES :—

JUST dust off the old dictionary, find your lorgnette and look up the meaning of the word "ethics." **Standard of character** is the most commonly understood definition. So by a process of reasoning Medical Ethics should be the epitome of all that is fine, all that is glorious and all that is true in medical circles.

You hear a lot about Medical Ethics nowadays and understand that this invisible neck-iron prohibits the modest M. D. from advertising his wares in the public press. You also are instructed that an ethical practitioner of the orthodox school must not solicit business at the ambulance stretcher nor split his "takings" with some enthusiast who "pulls in" patients to his cavernous offices. And yet, John Public, sees prominent M. D.'s over their own signatures endorsing all manner of tooth pastes, lotions, cold cures, bunion removers and germ eradicators on the advertising boards in true circus fashion and listens, perhaps in astonishment, while other ethical Medicos, far from anonymous, decant in florid tones over this or that sponsored radio health program.

There seems to be absolutely no limit to which a prominent M. D. may go and still remain safely within the sheltering folds of the professional ethics. True, the little and unsuccessful Medico may be called softly to account for ignoring the etherial proprieties of this mysterious check-rein but the world is beginning to understand that when an orthodox medical physician or surgeon has become famous he may then mold the ethical restrictions to meet almost any situation to which he may aspire.

I could cite you numerous instances where the "quackery" character of the business transacted by many prominent members of the medical profession have reeked to the Heavens and yet no visible censure was administered by those members of this privileged clan whose publicized duty it is to determine violations of the rules and regulations of professional conduct.

But we may let that pass. We all have seen so many "funny" things happen in medical circles that we realize that its standards of decency is rather gutta percha in their construction. It would seem that the correct ethics have chameleon characteristics of shadings and depend entirely on conditions—prominence of the M. D.—plus, in most cases, moneytary considerations.

The most sinister aspect of these highly flaunted ethics is the "huddle" tendency of the profession when one of their number gets caught in a "slip up." Then we find these same ethics are more rigid than the rugged cross, are more binding than a fraternal oath and are more sacred than a covenant of God. Mal-practice must be concealed—must be hidden from public knowledge—must be protected from criticism and derision.

Any lawyer will tell you that no M. D. will testify against the practices of another—no matter how flagrant may be the breach of the guilty brother. In private, an M. D. may condemn, in no uncertain terms, the ignorance—the assininity—the criminal carelessness of a fellow practitioner—even venturing the opinion that the culprit should be exposed, expurgated and executed—but these private opinions are always "off the record" and they receive a complete fumigation and white-washing before they reach the witness stand.

Why? The answer is simple—two words: mutual protection! No M. D. knows when he may let a knife slip or permit a prescription pencil to wander and thus send his unsuspecting patient to a premature Hallelujah. A simple operation often fills a shroud and a bunch of bad writing may turn a prescription into a death warrant.

MEDICAL ethics! These bespectacled, Van-Dyked executioners have adopted "Ethics" as a protective cloak in the place of the grotesque mask, the bullook horns, the feathers and the other masquerades of the Dark Ages which kept them anonymous and weaved about them the safety of superstitious immunity they no longer possess.

But the "Ethics" garment is becoming rather threadbare under the light of advancing civilization. The people are seeing through the sham and the day will come when murder in the surgical ward or the physician's office will have to stand the gaff just as truly as a "bumping off" in the ghetto. "Thou Shalt Not Kill" was written for the M. D.'s just as certainly as for the rest of humanity and, ethics or no ethics, the death cell will await all murderers whether murder is spelled murder or MurDer with an M. D. emphasis.

REJOINDER TO
YAKSMA-PUBLISHED IN DECEMBER 1932 ISSUE OF THE JOURNAL OF AURVEDA

BY

BROJENDRA NATH CHATTERJEE, KABIBHUSAN,
P. O. Kalna, Dist. Burdwan.

Kaviraj A. C. Kaviratna in his article on "Yaksma" [eulogised goat's milk as preventive and curative of "Yaksma" (Tuberculosis). His contention is now all the more strengthened by the fact that goat's milk is rich in fat, vitamine and calcium salt and is always free from the germs of Tuberculosis. Now a days when there is a growing menace of Tuberculosis all over the country it will indeed be advisable for the poor householders to keep a few goats in their houses so that they may be assured of rich and cheap supply of milk for the comsumption of their family members.

Britain, statistic reveals, is drinking more goat's milk than she used to do before to improve the health of her children.

Twenty years ago there in Britain production of goat's milk was to the extent of 2000000 gallons and six years hence the figure of production increased to 12000000 gallons. Today the figure has reached 20,000000 gallons.

India is a very poor country at the present moment and should try to comsume more goat's milk than heretofore done by her and this can well be done if every household is made to understand the utility of goat's milk in health and in diseases. The goats are really the poor man's cows.

Regarding goat's milk Ayurveda says :—

छागं कषायं मधुरं शीतं ग्राहि तथा लघु
रक्त पित्तातिसारघ्नं क्षय कास ज्वरापहरणम्
अजानामल्पकायत्तात् कटु तिक्तादि सेबणात्
स्तोकाम्बु पानाद् व्यायामात् सर्व्वरोगापहं पयुः ॥

The goat drinks less, walks more, possesses short physique and as such her milk is an antidote to all diseases. The milk contains the following virtues :—

1. Rich in fat, vitamine and Calsium Salt.
2. More easily digestible than cow's or Buffalow's milk.
3. Destroys Tubercle Bacilli.
4. Regulates Liver.
5. Useful in Diarrhœa, Gastralgia, Bile trouble (Pitta).
6. Beneficial in Phthisis, Bronchitis, Asthama, and Haemoptysis.
7. Tonic for lungs and heart complaints and dyspnoea
8. It invigorates and promotes appetite and digestion.
9. It is invaluable in rickets of children.
10. It is a useful drink in sluggish liver where cow's milk is not tolerated or contra-indicated.

From the above properties of goat's milk we find that goats milk is an invaluable drink for the consumptives described in the article of Kaviraj A. C. Kaviratna whose article would, I think, be appreciated not only by the Kavirajes but also by the Allopaths. There is indeed a necessity for comparative study of Ayurveda for renaissance of the Ayurdedic System of Treatment which has practically lost its charms on account of the consenvative nature of Ayurvedists of the day. Kaviraj Mohasaya deserves our sincere admiration for the lucid exposition of facts in respect of the intricacy of the disease and that we express through Journal of Ayurveda which is doing the yeoman's service for the spread of Ayarveda.

"Reports of Societies"

THE XXV SESSION OF THE

ALL INDIA MEDICAL LICENTIATES' ASSOCIATION

Held at Madras on 20th December 1932.

WELCOME ADDRESS

By Rao Sahib Dr. U. RAMA RAU, *Chairman, Reception Committee.*

The Hon'ble the Raja of Bobbili, The Surgeon General with the Govt. of Madras, Brother delegates, Ladies & Gentlemen :—

On behalf of the Reception Committee of the 25th All-India Medical Licentiates' Conference, I offer you a most hearty welcome to this historic city. This proud privilege was conferred upon me sixteen years ago, in 1916, when the XI Annual Sub-Asst. Surgeons' Conference was held in Madras and I take this opportunity of offering my humble and prayerful obeisance to the All-merciful Providence who has spared me all these years to serve my comrades in the Profession once again and also my heartfelt thanks to the Reception Committee for their unabated and uninterrupted confidence in me and choosing me as their chairman and spokesman, a second time, to-day. I see before me assembled in this hall, delegates from all parts of India, who have come here at a very great sacrifice of time and money and personal and professional inconvenience, in response to our invitation testifying in an abundant measure their zeal and earnestness, loyalty and *esprit de corps*—qualities which augur well of our future. Those of you, who have never visited Madras before, may naturally be desirous to know something of its ancient history and culture, its hoary triditions, if any, and the modern amenities and entertainments, which it can provide during your short sojourn. In this, I am afraid, you will feel disappointed. Madras can boast of no ancient culture or traditions for, as you all know too well, it sprang from a small insignificant fishing village in the early part of the seventeenth century when it was presented as a gift to the Hon'ble The East India Company by the Raja of Chandragiri for them to build their forts and factories on and ply their trade in the great eastern waters, to be 'the capital of a Presidency which has long been known as 'the benighted Presidency'. Nor can Madras boast of the splendour of Calcutta which has earned the well-merited distinction of 'the City of Palaces' or the wealth of Bombay which is 'the Gate-way of India, and which has a roaring trade and flourishing industries. Madras at best is 'a City of distances' which it certainly is and by which appellation it goes from the very day of its formation. But Madras is assuredly the maker of modarn British India for it was in that yonder fort there, the Fort-St-George, Lord Clive, the founder of the British Empire in the East, spent his early days, first as a quill-driver and latterly as the prime-mover in the Wars of the Carnatic, which laid the foundation for the British supremacy in the East. The Madras Beach, which is one broad road of nearly eight miles in length extending from Tondiarpet in the North to Adayar in the South, with its palatial buildings on the Western row, and the big expanse of water—the Bay of Bengal—in the East is really a sight for the Gods and a drive right through that road in bright moonlight or in the electric light in this dark half of the month will prove a pleasant pastime and a splendid recompense for all the defects and shortcomings of our City. Madras is proverbially poor and I would therefore appeal to you, to bear with us if our hospitality falls short of your expectations and our attention to your wants and comforts is meagre and below the mark. I hope and trust you will take the spirit for the deed and forgetting and forgiving our drawbacks, heartily cooperate with us, in our endeavour to make this conference a success.

Medical Education.

The one topic which is of all-absorbing interest and of vital importance to the Licentiates—the burning topic of the hour before which all others pale into oblivion—is Medical Education. Time was when medical education was imparted in the Vernaculars and for aught I know, there were Vernacular Medical institutions in Bengal and in our own Presidency, there was one such school in Nellore. As years rolled by and English education spread among the people, there was intense craving for professional studies. Since the establishment of the Indian Universities, Medical Colleges were started in the older Provinces and affiliated to the Universities But the University education was costly and the Government were sadly in need of cheap medical men to assist the

I. M. S. Officers as dressers or assistants in big hospitals in cities and towns or man the State, Local Board or Municial dispensaries in the mofussils. This resulted in the opening of Hospital Assistant classes in the various medical colleges, where a cheap training and instruction for three or four years were given. Their products —the Hospital Assistants—were employed on a princely salary of Rs. 25 a month Even among the graduate class, a lower order was created in the L. M. S., a qualification which like the present L. M. P. is not registrable in England— which, thanks to the efforts of Dr. Guruswamy Mudaliar and others in the Senate of the Madras University, has since been abolished. The old Hospital Assistants however continued to exist and their agitation for the last quarter of a century for the improvement of their lot, not merely in status and salary but also in the standard of education imparted to them, brought no tangible results. I say 'tangible' because the improvements so far effected have only touched the fringe of the problem and are only skin-deep Their designations were no doubt changed to Sub-Assistant Surgeons, perhaps on the analogy of Sub Assistant Inspectors of Schools in the Educational Deparment and latterly as Licensed Medical Practitioners and their minimum and maximum salaries were also raised. But their principal grievances still remain unredressed. They are (1) permitting the L. M. Ps. to qualify themselves for M. B. B. S., course, (2) raising the percentage of pass marks so as to conform to the percentage obtaining for medical graduates, (3) raising the course of studies to 5 years, (4) levelling up the standard of education, so that they may be eligible for recognition by the General Medicial Council of Great Britain for post-graduate study and also to compete with the graduates for higher appointments in the Medical Department in India. With regard to the first of the above grievances, I made the following observation in my address at the XI Annual Conference held at Madras, as Chairman of the Reception Committee :—

"Those of them who wish to pursue their studies in the Medical Colleges after passing their Sub-Assistant Surgeon Examination, should in justice be allowed to do so on such terms as the Universities may stipulate and lay down. After passing the Intermediate Examination of the University, a student is permitted to enter a medical *i. e.* after two years' training in an Arts College, subsequent to his passing the matriculation or an examination equivalent thereto, he is allowed to enter into his medical studies in a College affiliated to the University. But if the same student, instead of going up for the Intermediate Examination, undergoes a severe professional training and discipline in a medical school and passes all the prescribed tests, he is disqualified for an advanced professional studies in a Medical College. Is the two years' course in an Arts College more conducive to, or a better preparation for, the acquisition of professional knowledge than four year's training in a medical school, almost in those identical subjects in which instruction is parted in a Medical College ?

However that may be, it can be reasonably urged that a four years' training in a medical school is a better preparation for the study of medicine and surgery in a Medical College than the two years' course in the Intermedicate class of an Arts College. If this concession is granted, of course on such conditions as may be necessary to preserve the prestige of a high University degree in Medicine and Surgery, one obstacle that blocks the path of the Sub-Asst. Surgeon is removed."

Now, what is the position to day ? The authorities concerned kept dumb and remained unmoved for nearly 15 years since this utterance was made—a regrettably long interval indeed. It was only in March, 31 that Dr. M. R. Guruswami Mudaliar, to whom we are indebted, as I have already told you, for the extinction of L. M. S, brought forward a resolution in the Academic Council of the University of Madras providing for L. M. P. Diploma holders to qualify themselves for M. B. B. S. Degree under certain conditions and got it successfully carried through. The resolution runs thus :—

" A candidate, who holds the Diploma of L. M. P. or any other qualification accepted by the Syndicate as equivalent thereto, will be admitted to the Degree of M. B. B. S. provided (*a*) he passed the Diploma examination at least five years before the date of application for the Final M. B. B. S. Degree Examination ; (*b*) that he has passed the Intermediate in Arts of this University or an examination accepted by the Syndicate as equivalent thereto ; (*c*) that he attends for two years in all special courses in a College of Medicine affiliated to or recognised by this University ; and (*d*) that he passed Part II of the 1st and the whole of 2nd and Final M. B. and B. S. Examinations of this University and that the above regulation to take effect forthwith."

This, in my opinion, is simply a sop to the L. M. Ps. and not a sincere attempt on the part of the University to satisfy their legitimate demand. The one barrier against which exemption was sought for is still there, viz. to pass the intermediate Examination in Arts or an examination accepted by the syndicate as equivalent thereto. It is indeed a ridiculous waste of time and energy to force the L. M. Ps. to pass the Intermediate examination or the Cambridge Senior with credit in three subjects, as the syndicate, I understand, now require them to do, as being equivalent to the Intermediate in Arts. I ask what earthly use is there by his studying one of the Vernaculars or the classical languages which he ought to if he wants to get through the Intermediate or the Cambridge Senior. The Syndicate would have acted wisely if they had only ruled that the L. M. Ps. desirous of studying for the M. B. B. S. course should sit for the English paper alone in the Intermediate Examination exempting them from the rest or pass an entrance examination in English, Physics, Chemistry and Biology and exempt them from Vernacular and other subjects which are obviously not wanted for their purpose. Thus, this resolution is destined to be a dead letter as the L. M. Ps. who can run this obstacle race will only be few and far between and Madras must still be deemed to be sailing in the same boat with the rest of India, where even this half-hearted concession has not been extended. Next with regard to the second grievance, the raising of the percentage of pass marks, we must be thankful to Dewan Bahadur B. Munuswami Naidu Garu, Ex-Chief-Minister to the Government of Madras for allowing this concession. But this is something like allowing a prisoner some sort of freedom with additional fetters on. The test is made more severe, while the standard remains the same. In one way this may be helpful. It will limit the output of Licentates and thus lessen the possibility of more unemployment and starvation now staring the rank and file of the Medical Profession.

The raising of the course from 4 to 5 years too, which is the fourth in the list of our grievances, does not appear to me to be a remote possibility as our former Chief Minister has already openly agreed to this proposal and it only remains for the Hon. The Raja of Bobbili, who has succeeded him to that exalted office, to implement his decision by issuing an official fiat.

Lastly comes the raising of the standard of qualifications of the L. M. Ps. which stands as a stumbling block in the way of the realization of our hopes and ideals All are agreed that the time has arrived for raising the standard of L. M. Ps., that the baneful caste system in the Medical profession should be abolished and that henceforth there should be one uniform minimum standard of Medical Education maintained throughout the length and breadth of India. The Government of Madras appointed a Committee in 1928 to investigate into the matter and the Committee made their recommendations with regard to the L. M. P. qualification as follows :

"Considerable dissatisfaction has been expressed with regard to the existing L. M. P. qualification especially by holders of the diploma. At present there is no provision for higher education for L. M. Ps. in this country and those who aspire to a higher qualification are compelled to proceed to England and take up a continuous course for at least two years. So long as they remain in India, it is impossible for them to obtain a qualification which is registrable in the United Kingdom unless they are prepared to go through the University course from the very beginning. L. M. Ps. also demand a higher standard of professional education. The committee agrees with them and advises that the minimum course of instruction should be of five years duration. For the present, there may be two standards of qualification, one being the University degree and the other a Diploma which will entitle the holders to registration in the Madras Medical Register. The lower standard of qualification should be raised as soon as possible with a view to attaining the ideal of a uniform high standard of training with a single high minimum standard of qualification. The University Degree which is controlled by the University Authorities has not come under the consideration of the committee but it is recommended that the Diploma be granted by a licensing body which should control the examination, curriculum and instruction for the Diploma. The committee recommends that the prescribed minimum standard of preliminary education should be the University entrance examination with Science as the optional group. This standard should not be lowered because of a paucity of candidates or any other consideration. The Committee recommends that the selection of students should be purely on merit and should not be on any communal basis......Students of the Medical Colleges should be allowed to appear at the examination for the diploma so that those who fail in the University may have an opportunity of obtaining a qualification. These holders of Diploma who possess the minimum educational qualification which is prescribed for admission to the Medical Colleges should be eligible for recruitment to Government Service on the same terms as the University Graduates".

Ladies and Gentlemen, the above resolution is worded in the most emphatic and unambiguous language. The Committee from whom this recommendation had emanated was composed almost of officials, presided over by the Surgeon-General himself but still the Government are considering and considering. My humble scheme for the establishment of a College of Physicians and Surgeons in Madras, in conformity with the proposals suggested by the Committee had not had the approval of the Government, and was turned down, I notice, not on account of any defects or demerits but for financial considerations. In that case, we must be prepared to wait till the financial depression disappears and stability restored. Thus, the sum-total of our gains after 25 years of agitation with regard to the improvement in medical education is negligible, if not, altogether nil, and we must therefore pursue our agitation, constitutionally of course, and with redoubled effort, until we gain our goal.

The All-India Medical Council.

The administration of Medical Department and the control of Medical Education in India were vested till recently in the I. M. S. A meed of praise is certainly due to the I. M. S. who had contributed largely for the growth and expansion of the Allopathic system of medicine in India and for the efficiency of the Medical Department. In the matter of Medical Education, however, I regret to have to tell a different tale. Hitherto higher appointments in the professorial staff of a Medical College have been almost the sole monopoly of the members of the I. M. S. Often square men were put in round holes and consequently the quality of education and the nature of the training have deteriorated, though the numbers have increased. Since the advent of the Montague-Chelmsford reforms, and the consequent transfer of management of affairs of the Medical Department to the Minister of Public

Health in each Province, who is always an Indian elected by the popular vote, coupled with the growing number of students pursuing Post-graduate study in England, the General Medical Council of Great Britain, which is invested under the British Medical Act of 1886 with the authority of refusing to grant recognition to Medical degrees obtained in India if it is found that those degrees do not indicate a sufficient standard of medical education and qualification entitling the holders thereof to pursue post-graduate study in England, and which authority it never even once exercised so long as the I. M. S. held the administrative control of Medical Education and the number of degree-holders pursuing post-graduate study in England was few and far between, became perturbed, and suddenly awoke to their sense of reponsibility and began to exercise their right of control more rigidly than before, resulting in a serious tussle with the Indian Universities and the complete withdrawal of the recognition of the Indian Medical Degrees The only solution to this problem lay then in the establishment of an All-India Medical Council which will regulate the standard of Medical Education in this country and provide for uniformity between the various provinces of India and reciprocity between the several provinces of India and between India and the outside world, including Great Britain. How in 1926, the late Dr. Lohokare of Bombay, a distinguished member of the Licentiate class and my humble self of that same humble order, struggled hard to introduce a Bill in the Legislative Assembly and in the Council of State of which we were members respectively, how after Dr. Lohokare's sudden and untimely death, I piloted my Bill alone in the Council of State which had not reached beyond the circulation stage, for the simple reason that it contained provision for the representation and registration of the class known as Licensed medical Practitioners and the representation of medical practitioners registered under the Medical Acts of the Provinces of India who have been in the teaching staff of institutions in independent schools or methods of medicine, how I was compelled to withdraw my Bill on the assurance given by the then Hon'ble Member Sir Mahd. Habibulla Sahib that the Government themselves would introduce a Bill in the Assembly shortly, how, on being disappointed at over 3 years delay and demur on the part of the Government to introduce the Bill, I sought to introduce a Second Bill in 1929, removing all the objectionable features of my first Bill, with the exception of the representation of the L. M. P. class, how that Bill was also ill-fated and could not be moved on account of the resignation of my membership of the Council of State, and lastly, how the Government of India, after prolonged and protracted consultation with the Hon'ble The Ministers of Provinces and the University representatives introduced a Bill in the Legislative Assembly last session leaving the L. M. Ps. in the lurch and throwing them as outcastes and untouchables, are all matters of recent history, too well known to you to need any detailed description here. The position to-day is that the L. M. Ps. shall have no part or lot in the All-India Medical Council. There appeared sometime ago, a silver lining in the horizon, providing for separate registration of the L. M. Ps. and even that had vanished now and the mist had gathered again, perhaps more densely than before. What shall we do is the question now ? The public opinion is strongly in favour of our inclusion. The Medical Press in India had fought for it tooth and nail. In this connection I cannot refrain from quoting, though modesty forbids it, a paragraph from the leading article in an official medical organ—the Indian Medical Gazette of Calcutta—that appeared in its issue of March 1930 which represents its considered view on my Second Bill and which sums up the position clearly and in unequivocal language thus :—

"On a study of Dr. Rama Rau's bill, our opinion is that it appears to meet the present conditions admirably. It meets the Indian demand for self-government in medical affairs by the creation of an All-India body of democratic constitution to whom the General Medical Council of Great Britain may be expected to entrust the duties of supervision of medical education and inspection of examinations ; whilst it does away with the necessity for an official Commissioner of medical education, appointed *ad hoc* without consulting general medical professional opinion in India. The one direction in which opposition to the bill is likely to develop appears to be the suggestion that the All-India Council may override the Provincial Medical Councils. We believe that this danger is more apparent than real. Normally the right of inspection of medical study and examinations would be exercised, but we doubt whether the right of erasure of names from the medical register would be exercised except with regard to the names of persons reported to have been erased from the Provincial medical register. Undoubtedly the proposal for an All-India Council suggests a duplication of functions by a central All-India body and by the provincial councils, but in actual practice we doubt whether difficulties would arise. On the other hand, the medical profession in India would gain immensely by the creation of a democratic All-India council which would be an intermediary between itself and the General Medical Council of the United Kingdom and would ensure uniformity in the different provinces in India, and reciprocity between the different provinces of India, and between them and other medical councils in the British Empire and other countries. In brief, the bill attempts a sort of federal solution of the present problem which would leave the powers of existing provincial councils untouched, but yet introduce a central and co-ordinating mechanism which would give India combined representation with regard to world problems of medical education and registration".

If even after this weighty pronouncement in a pro-Govt. organ, the Govt. of India will not move, we will naturally be driven to despair. We have exhausted all our resources and it is now abundantly clear that it is impossible to induce the Government to respect public opinion in this country. There is only one more resort, one more chance left for us, viz to invoke the aid of the Assembly and induce them to make such radical alterations in the Bill as to make it thoroughly democratic, or in other words, grant us our birthright of Swaraj in Medicine which is in their hands. It is not a question of caste or community, power or party ; it is a question of honour, a question of life and death for the Medical Profession. The Govt. Bill now introduced in the Assembly is but an apology for a Medical Council. It is an alternative for the fat 'Commissioner of Medical Examinations' proposed by the Govt. of India at the instance of the General Medical Council of Great Britain and rejected by the Assembly. It is a white elephant, a grand official appendage, with the official element preponderating, ever ready to dance to the tune of the General Medical Council of Great Britain and benefitting none but a few graduates who want to pursue post-graduate study in England. The cost is totally incommensurate with the gain involved and the public and the profession must therefore vehemently protest against such a haphazard measure. We must be prepared, regardless of cost or convenience, to send a strong contingent to New Delhi, one from each Province when the Assembly is next time in session to convince the members of the righteousness of our cause and frivolousness of the Bill now placed before them and convert them to our views. The Medical graduates in India too have no reason to be enamoured of this Council and we hope they will not betray us in our hour of trial. The Profession must stand or fall together, as a whole. Brother Delegates ! Awake, arise, and stop not till the goal is reached !

Medical Services.

Let me now turn my attention to the Medical Services. In India, these services are arranged and put in water-tight compartments and the Licentiate class constitute the cinderalla of the profession. The Licentiates are employed by Government, Railways, Ports, Corporations, Local Boards and Municipalities. There are also among them, very large numbers who go by the name of 'Independent Medical Practitioners' whose strength swells as years roll by. Those of the Licentiates who have sought service can count on at least one meal a day. They are scattered mostly in the moffussil areas and have absolutely no means of improving their knowledge of Medical Science or improving their status. 'Once a Licentiate, always a Licentiate' is the present day slogan and there is no chance of even the best among the profession rising to higher appointments such as Asst. Surgeon-ship or Civil Surgeoncies with some rare exceptions here and there. Their inferior training and qualification stand in the way of their promotion to higher grades, though, in other Services, for instance, the Engineering Service, the lowest grade men, the overseers, have been raised to the post of Asst. Engineers and even Executive Engineers. There, merit and experience counts are the only criterions. But in the Medical Services, the caste system is so rigid that the higher ranks in the Services are unapproachable to the untouchables in the Service. The Licentiates can boast of a Mathura Das and a host of others who have outbeaten the higher ranks of the Profession in their knowledge of the art, but still they cannot claim equality of status. This caste distinction must go and we are determined to see it disappear at the earliest possible moment. Already the sister profession of Law cast off all caste distinctions and why not medicine ?

Coming to the Independent Medical Practioners among the Licentiates, I regret to have to observe that starvation stares a majority of them in the face. They are obliged, for want of living wages in the village parts, where the major portion of the population are too poor to pay the doctor's fees and still consider medical aid as a charitable act, which ought to be undertaken by the state, to crowd themselves in towns and cities to eke out their scanty and miserable subsistence, competing with the higher ranks of the services—the I. M. S. and the University Graduates. Further, in the cities there are State-aided Hospitals, equipped with all modern and up-to-date appliances and manned by the pick of the profession, which open their doors indiscriminately to the rich and the poor, to the needy and well-to-do. The result is that all turn to hospitals now for treatment, the rich and the influential getting the maximum of service at a minimum of cost. The position of the 'Licentiates' practising in towns and cities can now be pictured easily—in one word, it is 'precarious'. In 1924, when I was member of the Legislative Council in Madras, I had dim misgivings of the future of the so called independent Licentiates practising in the city and suggested a scheme to the Government of Madras, which now goes by the name of the Rural Medical Relief Scheme. I am tempted to quote the relevant portion of my scheme here, which though being worked half-heartedly is still considered a boon to the Licentiates and even graduates in Medicine and has helped to solve the unemployment problem among medical men, to a limited, though intangible, extent This is what I said then :—

"The attention of the Government has been repeatedly drawn to the utter inadequacy of medical relief in this Presidency, and the urgent need for devising ways and means for the amelioration of the sick and suffering, especially in the rural parts, but the cries of the public have been cries in the wilderness. The Government, instead of extending medical relief, have under the spell of "Retrenchment", ruthlessly cut down expenditure in this branch of administration, thus worsening the situation and aggravating human misery. The closure of some hospitals, the conversion of a few hospitals into dispensaries, the disbanding of a number of Assistant Surgeons and Sub-Assistant Surgeons already in service, and more than all, the growing increase in mortality and the lessening strength in the Nation's manhood are some of the horrible consequences of this "Retrenchment". There is yet some chance to retrieve the present deplorable position if only the Hon. the Chief Minister has the will and grit to move in the matter. I have a scheme on hand which I commend to the earnest and serious consideration of the Hon, the Chief Minister, and which, in my opinion, will go not only to alleviate human ailments in a small measure, but also, in a way, solve the problem of unemployment among medical men, which is rather acute at the present day. The Government need not be embarrassed about finance, for a large sum has been, or is going to be—for good or for bad, I cannot prophesy—released by curtailment of expenditure under dietary, medicine, etc., in the Royapuram and General Hospitals in Madras, which by re-appropriation, may be utilised for the purposes of this scheme. The scheme is this. About 100 medical officers for the whole Presidency may be engaged for duty at convenient village centres, whereever medical relief is scanty, and may be paid by the Goverment each Rs. 50 per mensem for subsistence and provided with Rs. 50 worth of medicines. The Medical Officer may appropriate the sale proceeds of medicines for his own benefit or may give medical aid gratis, and it is entirely left to him to develop his practice as well as he can. He will be obliged to maintain a register of work done, patients treated and medicines expended, etc., and will be placed under the supervision of the District Medical Officer.

Health and Hygiene.

LIFE AND HEALTH FROM SUNLIGHT

BY J. H. HOLLBERG.

THE old medical system has been exceedingly prolific in the invention of fads. Almost everybody knows something about Mr. Fletcher, who told us we must chew each mouthful of food from 20 to 40 times before we swallow it. Now we are told that this is not right because it tires the muscles which move the jaw and it overworks and strains our salivary glands and it seems that after all there is nothing in Mr. Fletcher's idea but many followed him without particular benefit for a long time. Then we have our morning exercises which still have to prove their beneficial results to the majority. We are told about extracts of glands taken from animals to make up for our own beneficial results to the majority. We are transplanting glands into our body from animals and while all of these suggestions may possess merit in individual cases they cannot be considered applicable to everybody either as a tonic or cure. In the New York Times magazine of Nov. 16, 1930, I read an article entitled "Our Quest for the Fountain of Youth," by Eunice Fuller Barnard, which is well worth our reading because it sets forth intelligently and clearly the fallacy of fads in relation to the well-being of our bodies, and if I may quote from this article the conclusions, in case you should be able to secure it, the following is of importance.

"Yet out of the mass of fads certain as yet uncontroverted facts stand out as possible guide posts on the road to Healh. **Sunshine,** vitamins, fresh air, exercise, mastication in moderation and a calm and optimistic mental attitude are still parts of most accepted hygienic codes as conducive to help if not to the prolongation of life." You will note that in the article just quoted, **"sunshine"** comes first, because it is the foundation upon which all organic matter and health is based and dependent.

More than 25 years ago Dr. A. Rollier of Switzerland discovered that he could cure children afflicted with rickets and also that many forms and cases of tuberculosis could be cured by exposing the sufferers uncloathed to the suns ray's in the open air.

Some years later Dr. Niles Ryberg Finsen of Cop enhagen, visited Dr. Rollier's sanitarium and was so impressed with the health building and curing properties of the sun that he decided to measure and photograph the sun spectrum in the Alps where Dr. Rollier was so successful in curing his patients. After he secured his measurements of the sunlight he returned home and constructed special arc-lamps and he found that by using pure carbons in specially constructed lamps he could duplicate the sun rays in the Alps; but he also found that other rays not in sunlight were present which were destructive to the skin. This discovery led him to use those destructive rays for the treatment of skin diseases and in this he became so efficient and successful that thousands of doctors from all over the world have visited and studied these wonderful methods in cure at the Finsen Institute.

Now through scientific research, invention and development we have succeeded in filtering out the destructive rays which Finsen used for the cure of skin diseases and have left the complete duplication of sunlight as required for general body and health building purposes and which are also of great use in the treatment of almost all systemic diseases.

REGAINING AND MAINTAINING HEALTH

BY

ALVA EMERY GREGORY M. D., N. D.

MANY try to cure all diseases by the use of baths, and truly baths will benefit most cases, by cleansing the system, but these cures are not permanent, and another cure is soon needed.

Some try to cure by osteopathic manipulation, while others essay to cure by electrictiy. Acute cases are often relieved and cured or suppressed ; but I find that in chronic cases I often did more harm than good. My results were temporary and a worse condition of the patient soon followed. Further on, I will explain my results with electricity, and why I quit its use and how I get better results now.

Some try to cure by osteopathic manipulations, and many are helped, but no real lasting cures are thus accomplished, especially in many of the chronic ailments, as the pads between the vertebra are not rebuilt and the spinal settling is not overcome as it should be by hand manipulation and corrections of lesions often fail to hold.

Shall I explain why so many different ordinary methods fail in so many of the older patients and that chronic diseases are increasing so fast is a proof that the conventional methods are all practically failures.

CANCER, the dread scourge of civilzation, has increased, according to Government reports, 500% in the last 50 years. Brights disease, another degenerative disease, has increased 131% in the last 10 years. Arteriosclerosis, hardening of the arteries, has increased 250% in the last 10 years. Heart disease has increased 50% in the last 10 years. Diabetes has increased 400% in the last 40 years ; and so the sad story of degenerate diseases goes on in spite of the great (so called) advancement in medical science, and in spite of all drugless methods.

Why don't prevailing methods cure disease ? Shall I let you into the secret of why so many fail, and why there is such an increase of degenerate and fatal diseases ? I fear that if I tell you what I know to be true, that you can scarcely believe the truth.

If medicine does not cure disease, why are so many lies published in the subsidized newspapers about medicine curing disease ?

Nature and nature alone cures disease. Nature is powerful, and nature's God is all powerful. The doctor who assists nature most is the best doctor, and gets results when others fail. Nature's path to regain or to maintain health.

Nature will cure many diseases if left alone, and if it is not in any way hindered by the use of irrational methods of treatment which interfere with her efforts.

Many unconsciously interfere with nature and do more harm than they do good. Bear with me and I will explain why and how nature is interfered with and hindered in her efforts.

The blood is the life of the human body ; and the functions of life are expressed through the action of the nerves. There is a better way to cleanse the blood, and a better way to restore a normal nerve supply than is generally used by naturopath drugless man, or by medicine.

Cerebro-spinal nerves all come from the spine. Therefore we can correctly conclude : that if the blood is pure, and if the nerves are free from interference, and if the diet is right, then we may truly enjoy good health, if our bodies have not been mutilated by surgery or by accidents.

The Griffith Brothers of England examined the spines of 148 acute and chronic cases, and found in 143 of them, that there were spinal muscular contractions, causing nerve interference and consequent derangement of function or disease.

They found that nerve interference in the upper dorsal caused derangement also of the heart, lungs, bronchi, pleura, etc.

They found that contractions and nerve interference in the middle dorsal were associated with stomach, liver, spleen, kidneys, intestinal and liver troubles.

They further found that contractions in the lower spine, and consequent nerve interference existed in connection with pelvic diseases, appendicitis, inguinal hernia, lumbago, sciatica, etc.

The Griffith Bros. published these facts in book from ; but the medical profession bought and burned all the books to keep these facts from the people.

IS ALUMINUM WARE POISONOUS ?

A New York City doctor who was the chief chemist for the Delaware, Lackwanna & Western Railroad for twenty-two years writes that Aluminum ware is poisonous. His statement of facts cannot be denied, and the conclusion is unescapable. Aluminum cooking utensils are a curse to humanity, and their manufacture and use should be forbidden by law.

In what a sorry light this article puts the Federal Trade Commission, which, with full knowledge of these facts, twice tried to intimidate The Golden Age, so that it might withdraw from its campaign in the interest of the welfare of the people.

What a miserable showing is also made by the American Medical Association, which, with every facility at its hands to know the truth, took its stand on the opposite side of this important question. Medical doctors have found space in newspapers and magazines in every corner of the land, wherein they have betrayed their wilful ignorance or dishonesty or both. In some of these instances, their articles boosting aluminum cooking utensils have been published alongside advertisements for the same wares. The aluminum trust has all the funds necessary to pay well for services rendered.

As to the Scientific American and The Literary Digest, which joined in the general parade of ignorance on this subject, let them now come forth and answer these statements of scientific evidence and literary facts else admit that they are neither scientific nor literary nor honest.

It is time now for the every Government to shake off its fear and give attention to the needs of the people. Without being so told, it knows, of course, that the findings of the socalled 'Mellon Institute' on this subject would have no value except to the aluminum trust. As for the American Medical Association, the Scientific American, The Literary Digest, and all the other publications which have sided in with the aluminum trust we now invite them to answer this article, and to set fact against fact, or else for ever keep still.

"In other words, on this aluminum cooking utensil question, the Government and Mr. Mellon's crowd, and the medical doctors and the papers and magazines that have trailed in their wake, can "either put up or shut up." Their bluff is permanently called."

N. P.

Medical News.

Calcutta will, we understand, shortly possess another Indoor Ayurvedic Hospital under the patronage and supervision of M. M. Gananath Sen, M. A., L. M. S., Saraswati of all India fame.

The hospital, it is understood, will have Medical, Surgical and Gynaecological wards and will be pretty big with 50 beds and will be situated at 94, Grey street where the learned Kaviraj has already started an Ayurvedic College with an outdoor Charitable dispensary in the year 1932.

We are glad to learn that the Calcutta Corporation has sanctioned a decent sum for the recurring expenditure of both the outdoor and indoor hospitals for the official year 1933-34 and we hope that the generous public and the Corporation will continue helping the infant Charitable institution just to help the worthy founder who has already given up his palacial building and spent a huge amount for the love he bears for Ayurvedic system of Medicine.

It may not be out of place here to note that the learned Mahamahopadhyaya has been always advocating the cause of Ayurvedic Science since he began his practice as a Medical man and has spared no pains in upholding the dignity of the Indigenous system in order to revive the science once again in all its glory, which may be said, without fear of contradiction, to have been the mission of his life. We wish the institution all success.

A. R.

ZEITSCHRIFT FUR WISSENSCHAFTLICHE BADERKUNDE,

Prof. Dr. Hermann Schlesinger,

"Gonorrhoe und Lues als Ursache von Gelenkerkrankungen",

(Gonorrhoeal and Syphilitic Diseases of the Joints.)

The author writes on the different forms of arthritis having their cause in a gonorrhoeal or syphilitic infection and states that gonorrhoeal affections of the joints as well as late syphilis involvements (arthro-lues tardiva - -schlesinger) are both easily amenable to treatment. Gonorrhoeal arthritis should be treated early by specific vaccines , diathermy and Bier's hyperaemia (but phlegmonous and suppurative forms should be carefully watched for). In chronic cases massage and warm baths are useful. Externally, applications of Antiphlogistine show good results. For chronic and obstinate cases baths at different spas are recommended.

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The Year Out

With the current issue, our Journal of Ayurveda completes its 9th year of existence and hopes to begin a new year with a brighter out-look, although the future does not seem to us to be at all bright or encouraging.

The year under review has been rather too gloomy, not only with regard to journalism but in every sphere of public activity. In this year we have had to pass through an ordeal, as it were. Of new business, had we none, on the other hand we had to lose some of our old friends and patrons due to the political turmoil through which India had to pass and is still passing as also due to economic crisis throughout the world. In this year, thousands of Indians were sent to prison for reason political under ordinances framed by the Government from time to time. Some were deported to the Andamans for various terms and some had to expatiate their sins even with their lives. Men and women of India, irrespective of caste or creed, had to undergo untold sufferings, humiliation and misery for the mere offence of loving their country. Freedom of speech and freedom of the press is a thing of the past in India and that too under the government of a nation that produced a "Milton", the great author of Areopagetica !

Patriotism, we know, is a great virtue if it succeeds, but it is a great crime if it fails. Yet there should always be a limit to everything. Open fight with an adversary is always laudable but to hit the opponent below the belt is not always praiseworthy. Instead of sending so many thousands of India's best men to jail, it would have been fair on the part of the Government to examine their own methods of ruling them and then remodel same if there was found something wrong in them. On the contrary, they are bent on supporting every action of their subordinates, good or bad, so much so, they have turned into law, the erst-while unpopular ordinances, so that the cup of our misery is already full.

Whatever might be the logic of the Government, it is our earnest appeal to the powers that be that they should keep in mind that they as well as their political opponents are, after all, human beings and display of justice should always be seasoned with mercy. It is men and not God that are liable to mistakes and if the rulers do always take exception to every act of omission or commission on the part of the ruled, merely for the sake of a false notion of prestige, then the earth becomes a place too bad for human habitation. Every religion also teaches men to forgive, lest we are not forgiven. Besides the religious teachings, history also tells us that great man-slaughtering wars have been fought due to this lack of humane quality on the part of the rulers. We do not clearly understand why such a lack of imagination becomes so much persistent with the rulers almost everywhere and at all times, when a mere show of mercy or generosity and tolerance may save so much loss of life, money, energy and worries on both sides. The psychology, however, is to be sought elsewhere. The reason is the rulers are always so much enamoured of power and comfort at the expense of the ruled that they cannot tolerate even the slightest suggestion of surrendering their long-enjoyed comfort and power and in case people agitate for imancipation, they try to crush them down by all means, fair or foul, without minding the lessons of history, because they think, too much infatuated with pride and power as they are, that history would not repeat itself at least in their case.

The above psychology is at the root of every ill-feeling between the government and the governed and the present affairs in India are not an exception and the adamantine attitude taken up by the Government forebodes further trouble in this accursed land. It is also a glaring fact in this unfortunate land that unlike other countries the Government here does not exist for the people but the people exist for the Government. Under such circumstances, it is idle to talk of peace here in near future or to expect trade revival and economic well-being.

We are business-men and as such should not meddle in politics as far as practicable. But truly speaking, matters are coming to such a pass that we might be forced to ventilate our grievances, if not for anything else, at least for the sake of mere existence. Whatever might be the opinion of great economists of the world in favour of trade revival, we cherish very little hope about business rehabilitation in the near future, unless and until something is done towards the suitable adjustment of political inequities throughout the world.

Turning towards the political conditions of the present-day, we find disturbance almost in all countries. In Asia, we see Japan and China up aganist each other in arms and although thousands have been killed and maimed and millions have been squandered, peace is yet to come in the far East. There is also an apprehension of fresh troubles due to some delicate relations between China and Russia as also between Japan and Russia. Let us, however, hope that these powers will settle up their disputes amongst themselves. Again some trouble may be apprehended for India due to the fateful Ottawa pact, as a little bird is whispering into our ears that some powers are already showing signs of discontent at the present arbitrary enhancement of customs duty. As publishers, we are also affected seriously and have got to pay customs duty for every foreign article even for blocks meant for printing, irrespective of country of despatch. Besides customs duty, enhancement in postage rates, in some cases from 200 to 300%, has put a very great obstacle in the field of progressive journalism.

However, as business-men, we should always be optimistic and try our best to make the best use of things. It is also our duty to exert our energy to muster all our strength and urge on the governments of every country to settle up their disputes which are always more or less due to their respective pride and false notion of prestige. We should also try our best to impress upon our government that their primary duty is to protect their subjects and their trade and not to quarrel with their opponents and thus indirectly oppress the latter. It is the good will of the subjects that is the best weapon to rule them with, while terrorism and punishment always keep away people from the side of the oppressor. Oppression may succeed for sometime but not always.

We understand that Mahatma Gandhi, the sponsor of Non-co-operation movement in India, has been set at liberty as soon as he launched upon his 21 days' fast for the sake of untouchables. We could have congratulated the government for this act of kindness, but the communique they released just after the announcement of Mahatmaji's peace gesture takes away much of the grace from this apparently kind act. It is now plain that Mahatmaji was released because it was feared that he might die of the fast or that it would be dangerous for his life if forced feeding was resorted to.

However, the fact stands that the congress-men outside jail have definitely suspended civil disobedience movement, for sometime at least. Let us wait and see how matters develop in the near future, so far as the country's economical betterment and trade revival are concerned.

It is rather amusing to note that many associations and journals, here as also in foreign lands, are condemning the Government's Policy in throwing out the opportunity and rejecting the peace gesture of the Mahatma just after his release. We are, however, not in a mood to condemn the attitude of the Government. Their term is simple and plain, and that is a choice between abject surrender and liberty or imprisonment for a period convenient for the purpose of the rulers From the apparent calm now prevailing in the country and sufficient armoury in the form of new laws and a vast police and military force at their disposal, it is not unnatural for the Government to think that they would be victorious ultimately. They also know the value of paper resolutions of the moderates, liberals and such others and also that of criticisers in newspapers. They understand very clearly that these critics would be the first to come up to them to run the new constitution now in preparation beyond the seas. The fact is also known to them that these so-called leaders have no power behind them and become critical just to capture votes during elections and that their criticisms do not go beyond their speeches. They also know that the only organization that can question their action is the National Congress and hence they are determined to end the fight for good and if their method of suppressing the congress seem to be a little too rough, nobody, at least the congress, should grudge it, because this is not uninvited after all. Again the common adage is there that "nothing is wrong in war or love".

Moulana Saukat Ali tried to play the role of a peace maker with any amount of optimism he could command, but we simply laughed at the idea. Mahatma Gandhi's self-imposed fast and suspension of C D. movement might have been possibly a political dodge for the release of political prisoners and Government may in that case justly apprehend danger in taking any hasty action and their demand for further security cannot be taken amiss, so that the great brother's failure is nothing surprising.

But there is also the other side of the shield. From what is already known of Mahatma Gandhi, the Government of Lord Willingdon might have at least believed him and in case of rupture, His Excellency might have banned the Congress again. Again Gandhiji's suspension of Civil Disobedience movement is practically a withdrawal of the movement itself which was almost moribund already. Government perhaps attach no value to Gandiji's announcement, as the movement was already under control and perhaps Gandhiji suspended it to save the face of the congress. But it is a mistake to suppose that congress is dead On the contrary it has gained ground through suffering throughout the length and breadth of the country ; on the other hand the apparent success of the Government is rather doubtful, because the wound that has been inflicted in the mind of the people of the land will take many long years to heal.

Nothing is too late in this world and mistakes are always remediable and we hope good sense will prevail in the long run and the common adage that "a man becomes cruel only to be kind later on" will again prove true in case of His Excellency Lord Willingdon and his government.

We hope to survey other problems touching ourselves in our next issue.

H. N. C.

Original Articles

JAIJJATACARYA.

(SEVENTH CENTURY A. D.)

BY

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Calcutta.

(*Continued from our April issue.*)

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ततो द्विवस्त्यक्तकल्कावापेषु कृशाग्रवह्निनां
दोषं मानञ्च विमृश्य अनुचित प्रत्यागतोपचितं
स्वीकरणे समवेतानि कार्य्याणि यथा मात्रायुक्तः
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92. जेज्जटाचार्य्यस्तु सव्रणाव्रणशुक्रस्य लक्षणं साध्यासाध्यत्वञ्च विपरीत क्रमेण पठति। P. 1319

93. जेज्जटाचार्य्यस्तु नयनशोषलक्षण कहताधिमन्थस्य पाठं न पठति। P. 1324

94. जेज्जटपठितत्वादस्माभिः पठितः अत्राजकाया अवस्थायां लेखनमपि कर्म्मातिदिशन्नाह। P. 1355

95. स च जेज्जटचार्य्येण दूषितः। P. 1375

96. एकाहं न्यूनदोषे त्र्यहं मध्यदोषे पञ्चाहमधिकदोषे इति जेज्जटाचार्य्यैः। P. 1388

97. स जेज्जटादिभिः न पठितः। P. 1401

98. कालानुसारिवा तगरमुलं जेज्जटस्तु द्वितीयसारिवामाह। P. 1402

99. स्तन्यप्रकोप कफमारुतपित्तरक्तैः इत्यत्र स्तन्यप्रकोपजनितैः-पिशितोदयाद्वेति अन्ये पठन्ति। अन्ये तु पिशितोच्छ्रयादिति-पठन्ति तौ च नेच्छति जेज्जटः।

100. सरक्तपित्तारुणेत्यादिना कर्णपाकलक्षणयुक्तमिति केचित् कथयन्ति। तच्च मम न रोचते यतो जेज्जटादीनामीदृशोऽभिप्रायः नास्ति। P. 1412

101. शिरोविरेकं वमनञ्च केचित् आमेन दातव्यमिति ब्रुवन्ति। इति पठन्ति। स च पाठो जेज्जटाचार्य्येण न अङ्गीकृतः॥ P. 1430

102. तैलं तिलतैलम्, तत्कल्कं मुद्गादिकल्कम्। अन्ये तिलकल्कमाहुः। तत् न इच्छति गयो जेज्जटश्च॥ P. 1439

103. जेज्जटाचार्य्यस्तु द्वन्द्वजज्वर पाठमेव न पठन्ति। P. 1481

104. यतः सर्व्वशरीरं सन्ततेन व्याप्ता सततादिभिश्च रसादिगतेन काल इति समादिष्टज्वराणां पाठो न तु पठनीयः। इति जेज्जटाचार्य्याभिमतम्। P. 1486

105. जेज्जटाचार्य्यस्तु उपवासैरिति बहुबचनात् दशविधमपि लङ्घनं सवातस्थं योज्यं तथा च। चतुष्प्रकारा संशुद्धिः पिपासामारुता-

तयो पाचनान्युपवासश्च व्यायामश्चेति लङ्घनमिति ईदृशं व्याख्यानं संशमनप्रस्तावे पुनःशोधनमभिहितं भवति ॥ P. 1495

106. जेज्जटाचार्य्यस्तु पूर्व्वकथितैः पश्चाच्छीतैः शृतैरिति मन्यते ॥ P. 1502

107. जेज्जटाचार्य्यस्तु सन्निपात ज्वरचिकित्सां पठित्वा द्वन्द्वजचिकित्सां पठति। दोषैः पृथक् समस्तैश्च द्वन्द्वैरागन्तुभिस्तथेत्युक्तत्वात् ॥ P. 1504

108. एतेन षट्संख्याधिक्यं केचित् शरीरिणामतिसार इत्यादि पाठं आमजातिसार लक्षणादनन्तरं पठन्ति युक्तश्चायं तथैव पाठः जेज्जटाचार्य्यवचनानुरोधेनात्र पठितः जेज्जटाचार्य्यं विहाय अन्ये टीकाकारकाः अस्य अनन्तरं पाठं न पठन्ति ॥ P. 1526

109. पित्तातिसारावस्थायाञ्च यो रक्तातिसारः तस्य चिकित्सा पित्तातिसारी यो इत्यादिना वक्ष्यमाणं अस्ति श्रीजेज्जटाचार्य्येननैष पाठो विमृश्यैव पठितः तन्मतानुसारिणा श्रीब्रह्मदेवेनापि ॥ P. 1535

110. जेज्जटाचार्य्यस्तु अत्रैवाध्याये वक्ष्यमाणानां कपिकच्छूशाल्मलीकाञ्जीत्यादिद्रव्याणां कल्कपित्तं पुटपाकविधिना सम्पाद्य तेन रसेन क्षीरेन पिच्छावस्तिर्देयः अथवा कपिकच्छ्वादि द्रव्य कल्क क्षीरेनापि पिच्छावस्तिर्देय इति मन्यते। P. 1537

111. जेज्जठाचार्य्यस्तु जराशोषिणो लक्षणमन्यथा पठति सन्न ते मूर्द्धं क्षीयमाणेत्यादिना आतुरोपक्रमनीये उक्तत्वात् ॥ P. 1552

112. लङ्घनं पाचनं स्निग्धमुष्णं वातानुलोमनम् ।
बृंहणञ्चामवत् पञ्च तद्धितं सर्व्वतन्विनाम् ।
स्नानावसेकः सूच्यग्रबाहुमध्यशिराव्यधः ।
स्नेहोऽनुलोमनञ्चैव प्रसस्तं सर्व्वतन्विनाम् ॥
इत्यादिकं पठन्ति। स च सर्व्वत्र अभावात् न व्याख्यातः। जेज्जटकेन अन्यग्रन्थदर्शनादुक्तः ॥ P. 1574

113. अन्ये च पूर्व्वपरिपाटीं परित्यज्य विना ओष्मेनेत्यादिकं समस्तमपि असौश्रुतं भणित्वा परित्यजन्ति। अस्माभिस्तु सर्व्वमतानुसारिभिर्ज्जेज्जटाभिप्रायेण पठितः ॥ P. 1574

114. कार्त्तिककुण्डः नीलोत्पलानां मधुना भस्मनापि परिप्लुतमिति पठति। स च जेज्जटाचार्य्येण सक्षौद्रम् इन्दिवरभस्मेत्यादिना अग्रे पठितः। P. 1605

115. कार्त्तिककुण्डस्तु अमोद्भवां मांसरसे निहन्तीत्यारभ्य उष्णोद्भवां हन्ति जलं सुशीतलं सशर्करं चेक्षुरसं तथाण्डं। इति यावत् न पठति। अस्माभिस्तु श्रीजेज्जटेन पठितत्वात् पठितः॥ P. 1649

116. जत्रुः स्कन्धोरसोः सन्धिरिति जेज्जटः। 1659

117. ताम्यते आकुञ्च्यते देह इति सम्बन्धः इति जेज्जटगयदासौ। P. 1660

118. केचिदत्राग्रे कृतस्ने यूषकषाये वा पचेदिति पठन्ति। तत्नेच्छति श्रीजेज्जटः। P. 1668

119. द्राक्षां हरीतकीमित्यादि। जेज्जटाचार्य्यस्तु अत्र प्रस्तावे कदम्बवीजानि पठन्ति। P. 1672

120. जेज्जटाचार्य्यस्तु देहानां स्निग्धकारित्वात् पूर्व्वोक्ता योगाः पठिताः अतो मयापि पठिताः। P. 1736

121. जेज्जटस्तु प्रकरणं तथा शिष्य सुखबोधार्थं पठित्वा तत्पर्य्यायवृत्तिं न अङ्गीकरोति। P. 1736

122. सर्व्वात्मके त्रिभिरपि व्यतिमिश्रितानि रूपाणि वातकफपित्तकृतानि विद्याद् इति। अयञ्च श्रीजेज्जटेन एकीयमतेन दर्शितो न तु व्याख्यातः। P. 1766

123. अत्यर्थकर्शितस्यापि उपचयार्थम्। अनिलघ्नेन विधिना स्नेहस्वेदादिना। अतः परमपरेऽधिकं पठन्ति नदी जलमित्यादि। स तु जेज्जटकृतटीकायां न दृश्यते। P. 1782

Jaijjata is quoted in *Vakhyakusumavali*.

PP. 86, 88, 111, 118, 143, 146, 176, 208, 288, 320, 333, 348, 349, 362, 365, 423, 459, 461, 463, 491, 533, 548, 556, 575, 574, 603.

FEVER IN AYURVEDA

BY

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(*Continued from our April issue.*)

Remedies for fever.

Mritunjay
Brihat Jwarankusa
Jwara Churamoni
Kasturibhusana
Lakshmibilasha
Panchanan Rasa
Saubhagya Batika
Swarna-swataka.

Bataja-azar (Nervous type) is fever due to derangement of *Bata* which comes under function of the central or sympathetic nervous system. Nervous phenomena predominates in *Bataja* fever. The word *Bata* does not imply wind but comprehends all the phenomena.

वेपथुर्विषमवेग: कण्ठौष्ठ परिशोषणम्
निद्रानाश: क्षवस्तम्भो गात्राणां रौक्ष्यमेव च
शिरोहृद्गात्ररुग्वक्त्र वैरस्यं गाढविट्कता
शूलाध्माने जृम्भणञ्च भवत्यनिलजे ज्वरे ॥

The following symptoms are marked in Bataja-azar :—

1. Shivering
2. High Temperature
3. Skin dry and hot
4. Dryness of tongue lips and mouth.
5. Sleeplessness.
6. Pain in body specially over head and chest.
7. Constipation or hard stool.
8. Pain in stomach.
9. Ywaning.
10. Pulse more quick.
11. Respiration more rapid.

In Bataja type of fever prescribe decoction of one of the undermentioned recipes of vegetable kingdom at the first stage.

1. R/.

Bael Root Bark (Aeagle Marmelos) ...	¼ tola
Sona Root Bark (Bignoi Indica) ...	¼ tola
Gambhari Root Bark (Gmelia Arborica) ...	¼ tola
Ganiari Root Bark (Chelorioides) ...	¼ tola
Parul Root Bark (Stercospermum Suaveolens)...	¼ tola
Add Aqua	½ seer.

Boil it over gentle fire preferably on earthen pan and reduce it to 4 oz. then strain through a linen for use. To be taken twice a day. The above preparation is called Billwapanchamula kwath.

2. R/.

Long Pepper Root (Piper Longum) ...	gr. 132
Guduchi (Tinospora Cordifolia) ...	gr. 132
Sonth (Ginger)	gr. 132
Add Aqua	½ seer

Boil the above over gentle fire and reduce it to 4 oz. and strain through a linen for use. To be taken twice a day.

Therapeutic action of the recipes is described below :—

1. Bark of Bael Tree (Bilva)—Stimulant and anti-pyretic.
2. Bark of Sonal Tree (Cassia Fistular)—Purgative, tonic and febrifuge.
3. Bark of Gambhari (Gmelia Arborica)—Demulcent, stomachic, tonic, laxative and refrigerant.
4. Bark of Ganiari—Stomachic, carminative, alterative and tonic.
5. Long Pepper—Stimulant, carminative, alterative, aphrodisiac, diuretic, emmenagogue, vermifuge and tonic.
6. Guduchi—(Tinospora Cordifolia)—stomachic, bitter. tonic, alterative, anti-pyretic, mild diuretic, aphrodisiac, antacid and anti-periodic.
7. Sonth (Zingiber Officinalis)—Aromatic, sialagogue, stomachic, carminative, digestive and stimulant.
8. Parul (Stercopermum Suaveolens)—Febrifuge, diuretic and refrigerant. It is indicated in fever, cough and dropsy.

Recipes of Vasadi-Kasaya.

1. R/

Vasaka (Adhatoda Vasaka)	¾ tola
Kantakari (Solanum Jacquinii)	¾ ,,
Gulancha (Tinospora Cordifolia)	¾ ,,
Aqua add	½ seer

Boil the above over gentle fire and reduce it to 4 oz.. To be taken twice a day.

Marichadi Kasay.

2. R/

Black pepper (Piper Nigram)
Root of Long Pepper (Piper Longum root)
Sonth (Zingiber Officinalis)
Krishna Jira (Nigella Sativa)
Long Pepper (Piper Longum)
Chireyeta (Creat)
Katphal (Myrica Nagi)
Kur (Costus Speciosus)
Mutha (Cyperus Rotundus)
Batch (Acorus Calamnus)
Haritaki (Terminalia Chebula)
Kantakari (Solanum Jacquinii)
Jatamansi (Nardostachys Jatamansi)
Kakrasringhi (Rhus Succedanea)
Ajowan (Ptychotis, Ajowan)
Neem Bark (Bark of Margosa tree, Azarichta Indica)

Take equal part of the above recipes to weigh two tolas add ½ seer of water and reduce it to 4 oz. by boiling over gentle fire. Then strain through a linen for use. To be administered twice a day.

Therapeutic action of the recipes is described below :—

Vasaka (Adhatoda)—Antispasmodic, expectorant, diuretic, alterative; useful in bronchitis, asthma and whooping cough. It is useful in hæmorrhage and hæmaptysis,

Kantakari (Solanum Jacquinii)—Aperient (vedaniya), carminative, expectorant and diuretic. It is useful in asthma, cough and catarrhal affection of lungs and in fever with flatulence and pain in the chest with other medicinal plants or metals.

Gulancha (Tinospora Cordifolia)—Alterative, tonic, bitter, stomachic, antiperiodic, demulcent and aphrodisiac. It is invaluable in debility caused by repeated attacks of fever and is a good substitute for Peruvian bark. It is useful in enlarged spleen, rheumatism, dropsy, jaundice, headache, as well as in seminal weakness and in urinay affection.

Black Pepper (Piper Nigram)—Acrid, pungent, hot, carminative, antipyretic and antiperiodic. It is useful in dyspepsia and flatulence.

Sonth (Zinziber Officinalis)—Aromatic, stimulant, carminative, sialagogue, stomachic and laxative. It is useful in dyspepsia, flatulence, colic, chronic bronchial cough and dropsy.

Krishna-Jira (Nigella Sativa)—Carminative, lactagogue, aromatic, stomachic and stimulant. It is useful in dyspepsia, flatulence, diarrhœa, intermittent fever and in hoarseness of voice.

Long Pepper (Piper Longum)—Stimulant, tonic, carminative, alterative, vermifuge, emmenagogue and aphrodisiac. It is useful in dry cough, hoarseness of voice, asthma, rheumatism and dyspepsia.

Chireyeta (Creat)—Valuable bitter tonic after fever and in general debility. It is febrifuge, aperient, tonic and diuretic.

Katphal (Myrica Nagi)—Stimulant, alterative, aromatic, diaphoretic and astringent. It is useful in fever, catarrh, diarrhœa, dysentery, scrofula and in chronic urinary diseases.

Kur (Costus Speciosus)—Bitter, astringent, digestive, anthelmintic, stimulant, and is useful in catarrhal fever.

Mutha (Cyperus Rotundus)—Diuretic, diaphoretic, demulcent, ennemagogue, stimulant, vermifuge and tonic. It is useful in fever and cachexia.

Batch (Accorus Calamnus)—Aromatic, expectorant, antispasmodic, antiperiodic, stomachic, carminative and emetic.

Haritaki (Terminalia Chebula)—Safe and efficacious purgative, stomachic, laxative, alterative and tonic. It equaminates Pitta and eleminates *bile* and *slesma* (phlegm). It is useful in rheumatism, worms flatulence, chronic diarrhœa, piles, hæmorrhage and is of invaluable service in combination with other drugs.

Jatamansi (Nardostachys Jatamansi)—Nervine tonic, stimulant, alterative, antispasmodic, aromatic, diuretic, sedative, emmenagogue and digestive. It is widely used in hysteria, palpitation of heart, headache, flatulence, nervous convulsion and in disturbance of menapause.

Kakrasringhi (Pisttacia Integerrima)—Tonic, expectorant, stimulant, astringent, and aphrodisiac. It is useful in catarrhal fever, asthma, phthisis, psoriasis leucorrhœa and mucous discharges.

Ajwan (Ptychotis, Ajowan)—Aromatic, stimulant, stomachic, carminative, antispasmodic, digestive and antiseptic. It is indicated in dyspepsia, diarrhœa and in spasmodic affection of the bowels.

Pitta-azar (*Thermic Type*)

Pitta-azar is due to deranged pitta, the word pitta does not mean as it is erroneously believed bile but it signifies the function of thermogenesis or heat production and metabolism comprehending in its scope the process of digestion and excretion of waste product and elimination of tissue combustion.

वेगस्तीक्ष्णोऽतिसारश्च निद्राल्पत्वं तथावमिः
कण्ठौष्ठ-मुखनासानां पाकः स्वेदश्च जायते
प्रलापोवक्त्रकटुता मूर्च्छादाहोमदस्तृषा
पीतविण्मूत्रनेत्रत्वं पैत्तिके भ्रम एव च।

The following symptoms are noted in the *Pitta* type of fever :—

1. High Temperature
2. Diarrhœric stool
3. Insomnia
4. Nausia
5. Eruption appears on lips and face
6. Feeling of soreness in mouth, nose and œsophagus
7. Excessive perspiration
8. Locoacity
9. Bitter taste in mouth
10. Frequent micturition
11. Colour of urine is deep yellow
12. Great thirst for water
13. Turning sensation in the head as if the patient would fall down.

In Pitta-azar either of the following combination of herbs would be found useful to cope with the concommittant symptoms :

1. R/

Gulancha (Tinospora Cordifolia)	gr. 36
Chirayeta (Creat)	,,
Bana Root (Root of frangrant Grass)	,,
Aguru wood (Aquilaria Agallocha)	,,
Mutha (Mulathi)	,,
Teuri (Ipomoea Turpethum)	,,
Amla (Myrobalan Chebulic)	,,
Draksha (Grapes)	,,
Vasaka (Adhatoda Vasaka)	,,
Khetpapra (Oldenlandia Corymbosa)	,,
Aqua add	½ seer.

Boil the above over gentle fire and reduce it to 4 oz. Administer twice with honey. This preparation is called Guruchyadi-Kasaya in Ayurveda.

Kriratadi Kasaya is another useful combination of herbs indicated in Pitta-azar specially where there is great thirst for cold water with complaints of nausia and vomiting attended with burning sensation both internally and externally.

Recipes of Kiratadi Kasaya are as under :—

2. R/

Chireyetta (Creat)	gr. 70
Gulancha (Tinospora Cordifolia)	,,
Coriander (Coriandrum Sativam)	,,
Bana Root (Root of Fragrant Grass)	,,
Khetpapra (Oldenlandia Corymbosa)	,,
Padmakastha (Prunus Padam)	,,
Aqua add	½ seer

Boil the above over gentle fire and reduce it to 4 oz. then strain through a linen for use ; to be administered twice a day.

Kapha-azar (*Catarrhal Type*)

Kapha-azar is fever due to derangement of Kaph. *Kapha* does not mean phlegm but implies the function of various fluids that is mucous membrane, synovia etc. and heat regulation or thermotaxis. In Kapha-azar the internal mixture predominates and there is inflammation of mucous membrane of the respiratory tracts producing catarrh.

स्तैमितं स्तिमितोवेग आलस्यं मधुरास्यता
शुक्लमूत्रपुरीषत्वं स्तम्भस्तृप्तिरथापि च।

नात्युष्णगात्रताच्छर्दिरङ्गसादोऽविपाकिता
गौरवं शीतमुत्क्लेदो रोमहर्षोऽतिनिद्रिता
प्रतिश्यायोऽरुचिः कासं कफजेऽक्ष्णोश्च शुक्लता ॥

In Kapha-azar (Catarrhal type) the following symtoms are marked :—

1. Skin is moistened
2. Temperature is not high
3. Wearyness
4. Appearance of face is not altered
5. Heavyness of limbs
6. Fæces and urine look pale
7. Skin is not very hot to touch
8. Vomiting or nausia
9. Relaxed feeling of limbs
10. Drowsyness
11. Hairs stand at their end
12. Running of nose
13. Watering of mouth
14. Aversion to food.

Vasakadi Kasaya is highly useful in Kapha-azar specially where it is attended with teasing cough. Some time Marichadi Kasaya is prescribed with advantage.

Preparations of both the kasayas have already been described above.

Mritunjay Rasa is widely used in remittent and in intermittent fevers with deranged Vata.

R/ Mritunjay Rasa	1 pill

Every three hours 3 or 4 times a day with betel leaf juice or with juice of raw ginger if the catarrhal complaints predominate. The medicines should be continued for a couple of days even after the remission of fever. But to have expeditious effect one of the above decoctions described before for fevers should be used with Mritunjoy Rasa as its vehicle.

Recipes of Mritunjoy Rasa are as under :—

Corrected Hingula (Cinnabar)	2 tola
" Mitha (Aconite Ferox)	1 "
Corrected Sulphur	1 "
Pulv. Black Pepper (Piper Nigrum)	1 "
" Long Pepper (Piper Longum)	1 "
Corrected Pulv. Borax	1 "

Rub the above in water to mass and prepare pills of 2 grains each for medicinal use.

There is another form of Mritunjoya Rasa which is as efficacious as the previous one and is widely used by vaids.

Recipes of Mritunjay Rasa :—

Corrected Mitha (Aconite Ferox)
Pulv. Black Pepper (Piper Nigrum)
„ Long Pepper (Piper Longum)
Corrected Sulphur
„ Borax
„ Hingul (Cinnabar)

Take equal parts of the above receipes and rub in raw ginger juice and prepare pills of 2 grains each.

This is a wonderful medicines for Nava-azar. This is advised to be taken in the morning with honey and Tulsi leaf juice (Ocimmum Sanctum) or with betel or ginger juice and honey and may be given 3 to 4 times at an interval of 4 hours. While in the evening Naradiya Lakshmibilash should be administered with honey and betel leaf juice or with rock salt and ginger juice if catarrhal symptoms prevail.

Should there be no marked improvoment in three or four days time it would necessitate Panchanan Rasa, which should be prescribed once or twice a day with honey or with water or with any other indicate decoctions prescribed above.

But in case the bowels are constipated it should be moved with a purgative or with Vasti (Enema) as advised in Susruta Chikitsasthanam, because the accumulated fæces in the bowels if not washed out would be producing toxin and bring in many other complication by damaging the Vayu, Pitta and Kapha singly or in combination with one another.

In chronic types of fever this Mritunjaya is prescribed with satifactory result when administered with Shephalika leaf juice twice a day. But in case the liver and spleen are enlarged with sensible rise of temperature in the evening it should be given with Sephalika leaf juice or with ginger juice in the morning and Swarbajwarahara Lauha in the evening with Long Pepper powder and old treacle combined with a pill of Mritunjaya Rasa. Marvellous results are obtained from the use of Sarbajwara-hara Lauha in combination of Swarnasataka.

But in case the fever is attended with diarrhœa, excessive burning sensation, great thirst and restlessness Mritunjaya in lemon juice works wonder.

In Ayurveda one medicine could be prescribed with advantage in different diseases and in different stages only adding a judicious and suitable vehicle.

The proper selection of vehicles would depend on the knowledge of therapeutic action of the herbs and drugs.

To obviate the difficulty which generally occurs in practice of the beginners the therapeutic action of the drugs has been described in nutshell and it is hoped the same would be helpful to the beginners as well as to the busy practitioners and the writer would consider himself amply compensated if this serve their purposes to prescribe correctly to the suffering humanity.

Recipes of Naradiya Lakshmibilash.

Reduced Abhram (Mica)	8 tolas
Corrected Paradam (Murcury)	4 ,,
,, Sulphur	4 ,,
Camphor	4 ,,
Pulv. Jaitri (Mytastica Fragram)	4 ,,
,, Jaiphal (Nutmeg)	4 ,,
,, Bidharakbija (Gamelina Aristica)	4 ,,
,, Corrected Dhuturabija (Dhatura Fastuasa seed)	4 ,,
,, ,, Sidhibija (Canabis Indica)	2 ,,
,, Bhumikusmanda (Ipœmœa Digitata)	2 ,,
,, Satamuli (Asparagus Racemosa)	2 ,,
,, Gorakshachakula (Hemionitis Cordifolia)	2 ,,
,, Berela Root (Sida Spinosa)	2 ,,
,, Gokshura bija (Tygophyllæ Tribulusterrestris)	2 ,,
,, Hijli Bija (Enginea Aculanguala)	2 ,,

Rub the above together and add juice of betel leaf quantity required and prepare pills of 6 grains each. This is prescribed in various types of fever with a suitable vehicle as described in the foregoing pages. It is very useful in headache, aching pains in the limbs and body, languor, waterbrush, slimy mucous expectoration, corryza, runing of nose, swelling of face and eye lids with slow temperature.

Recipes of Pançhanan Rasa.

R/

Corrected Mitha (Aconite Ferox)	2 tola
Pulv. Black Pepper	2 ,,
Corrected Sulphur	4 ,,
,, Hingula	3 ,,
Reduced copper	1 ,,

Rub the above in juice of Akanda root and prepare pills of 2 grains each, During fever the administration of the medicines twice or thrice a day would bring down the fever to normal temperature, If the patient feels any sort of external heat after its administration he should be given to drink sugar candy water freshly prepared.

Recipes of Swarba-jwarahar Lauha.

R/

Pulv. Root of Chitamul (Root of Plumbago Zeylanica)
,, Bahera (Terminalia Belirica)
,, Amlaki (Phyllanthus Emobheca)
,, Haritaki (Terminalia Chebula)
,, Sunth (Zingiber officinalis)
,, Long Pepper (Piper Longum)
,, Black Pepper (Piper Nigram)
,, Biranga (Embelia Ribes)
,, Mutha (Cyperus Rotundus)
,, Gajapippuli (Piper chaba)
,, Long pepper root (Root of Piper Longum)
,, Ushir (Root of Fragrant Grass)
,, Devadaru (Pinnus Devdara)
,, Chiraetta (Chirayta)
,, Bala (Pavonia Odorata)
,, Katki (Black Hellebore)
,, Kantakari (Solanum jacquinii)
,, Sajina-bija (Moringa seed)
,, Jaistamadhu (Liquoris Root)
,, Indrajab (Kurchi seed)
Reduced Iron add 5 tolas.

Rub the above in water and prepare pills of 4 grains each. The medicine should be prescribed as directed above.

Recipes of Swarna-swattaka :—

Spread some thin layer of Mica over an Iron pan then put one layer Bansapatra (Bamboo leaf) over the layer of mica then the pieces of Harital (Realger) should be placed over the Bamboo leaf to a digit deep height. Realgar thus placed should be covered with an iron pan which would be pressed down with a brick. The pan then should be placed over fire and burnt for three hours. When it cools down the mica should be thrown away and Makaradhwaja like substance should be collected for medicinal use.

The preparation thus obtained is called Swarnasattaka and is highly efficacious in fever, rheumatism and impurities of blood as well as in syphilic affection. It is prescribed with admirable result during the remission of fever with addition of Naradiya Lakshmibilash or Sarbajwarahara Lauha or Mritunjay Rasa according to deranged condition of Vayu, Pitta and Kapha with honey. In rheumatism it should be prescribed with juice of Bael leaf and honey and in skin diseases it is prescribed with Neem leaf juice only.

Recipes of Soubhagya Chintamoni.

R/

Corrected Borax
Corrected Amrita (Aconite Ferox)
Jira (Cumin seed)
Saindhabalaban (Rock salt)
Karkachalabana (Table salt)
Bit Labana (Black salt)
Sachala Labana (Unaqua Sodium chloride)
Sambhar Labanam (Sodii. muras)
Ginger (Zingiber officinalis)
Long Pepper (Piper Longum)
Black Pepper Piper Nigrum)
Haritaki (Terminalia Chebula)
Amlaki (Phyllanthus Embolica)
Bayra (Terminalia Belirica)
Reduced Mica (Aluminium Silicate)
Corrected Sulphur
Corrected Mercury (Hydrargyrum)

Take equal parts of each of the above ingredients and rub in juice of Nisinda, Sephalika leaf, Bhringaraj, Vasaka and Apamarga separately one after the other and prepare a mass from which pills of 4 grains each should be made and administered in fever as allopaths do prescribe their fever mixtures. In my practice I have observed, it acts better than

Alkaline mixtures (Fever mixtures) of allopaths in reducing the complication and temperature with greater rapidity. It is more widely used by Ayurvedists in Vata-slesmic (Catarrhal types) of fever.

Jatamansi (Nardostachys Jatamansi)—Nervine tonic, stimulant, alterative, antispasmodic, aromatic, diuretic, sedative, emmenagogue and digestive. It is widely used in hysteria, palpitation of heart, headache, flatulence, nervous convulsion and in disturbances of menopause.

Kakra Sringi (Pistacia Integerrima)—Tonic, expectorant, stimulant, astringent and aphrodisiac. It is useful in catarrhal fever, asthma, phthisis, psoriasis, leucorrhoea and mucous discharges.

Ajwan (Ptychotis Ajwan)—Aromatic, stimulant, stomachic, carminative, antispasmodic, digestive and antiseptic. It is indicated in dyspepsia, diarrhoea and in spasmodic affection of the bowels.

Other three medicines viz. Brihat-Jwarantaka, Brihat Jwara Churamoni and Brihat Kasturibilas which are in common use in fevers are dealt with below and the judicous administration would combat may a complication with success without undergoing expensive treatment.

Recipes of Brihat-Jwarantaka is as under.

R/

Corrected Mercury (Hydrargyrum)
,, Gandhaka (suplhur)
,, Copper (Cuprum)
,, Hingula (Trisulphuret of Arsenic)
,, Iron (Ferrum)
,, Banga (*Stannum*)
,, *Swarnamakshika* (*Ferri Sulphuretum*)
,, *Kharpar* (*Zinci Carbonas*)
,, Monchhal (Bisulphuret of Arsenic)
,, Gold (Aurum)
,, Abhra (Mica)
,, Girimati (Silicate of Alumina)
,, Sohaga (Sodii Biborus)
,, Silver (Argentum)

(To be continued.)

GYNÆCOLOGY, OBSTETRICS, AND PEDIATRICS OF THE AYURVEDISTS

BY

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(*Continued from our April issue*)

Discharges :—

A. General Aetiology, Symptomatology and Therapeutics.

PRADARA (Metrorrhagia ; Hæmorrhages ; Leucorrhœa)—It is a disease which comprises the end results of deranged 'Menstrual Fluid' (Ma.). *Vayu* enters the ducts which carry 'Menstrual Fluid,' and increases the flow ; (1) *Rakta*, *Pitta*, and *Vayu* predominate in this complaint ; hence the disease is called *Asrigdara* ; and (2) because it flows copiously, the disease is called *Pradara* (Ch.) *Vayu*, *Pitta*, *Kapha*, and all the three Humours aggravate and cause *Pradara* (Sha.).

Causes.—Aggravation of Vayu is due to excessive indulgence in saline, sour, heavy, acid, pungent, or oily food substances ; excessive indulgence in flesh of domestic or aquatic animals that are very fat ; or indulgence in rice cooked with milk or in curds, buttermilk, and honey (Ch). Indulgence in contrary foods, alcoholic drinks, too frequent meals ; dyspepsia, abortion, miscarriage, excessive sexual intercourse ; too much walking ; excessive grief ; loss of body-weight due to fasts, carrying heavy loads, blows on body ; and sleep during day (Ma.).

Symptoms.—There is excessive menstrual flow (Ch.). There are pains in the body, twisting pains in hands and legs, weakness, fainting fits, somnolence, thirst, burning of body, anæmia, drooping of eyelids, and other symptoms of aggravation of *Vayu* (Su.).

Classification of Pradara.—*Pradara* is of four kinds according to the predominant Humours—*Vataja*, *Pittaja*, *Kaphaja*, and the three of them *Sannipataja* (Ch. and Sha.). Charaka does not appear to include Menorrhagia and Metrorrhagia (*Rakta Pradara*) in this list. Sushruta, Vagbhata, and Sharngadhara include this and three other combinations of two humours each.

The 'Menstrual Fluid' may be vitiated by *Vayu*, *Pitta*, *Kapha*, and *Rakta* Humours either severally or in combination; it then exhibits the characteristic colour and pain of the deranged Humour; such 'Menstrual Fluid' is unfit for fecundation; it is incurable when affected by a combination of two or more Humours (Su.).

General Treatment.—When the 'Menstrual Fluid' is found vitiated, first give successively the Five Preliminary Treatments:—(1) Medicated oil (*Senha-Karma*), (2) purgatives, (3) emetics (Su.). Give all those treatments used (4) in diseases of the generative organs, (5) in dysentery, (6) in hæmorrhagic diathesis (*Rakta-Pitta*), and (7) in bleeding piles (Ch.). (8) Take with goat's milk or rice-gruel, boiled, paste or powders of *Mimosa pudica*, *Woodfordia floribunda*, *Aegle Marmelos* raw fruit, *Cissampelos Pareia*, *Bombax malabarica* gum, *Cyperus rotundus*, *Aconitum heterophyllum*, and decoction of *Holarrhena antidysenterica* bark; this is also useful in acute dysentery and piles (Sha.).

Local Treatment.—Give (1) *Asthapana*, and (2) *Anuvasana* enemas, etc.; medicated vaginal douches should be given in all menstrual disorders; after this, employ locally, the paste of drugs (*Kalka*), medicated suppositories (*Pichu*), and vaginal douches with decoctions (*Achamana*) as described in treatment of the diseases of the generative organs in the next Section (Su.).

B. Detailed Classification.

(1) VATA-PRADARA:—The 'Menstrual Fluid' is frothy, thin, dry, dark-coloured, red, or of the colour of the infusion of *Butea frondosa* flowers; there may or may not be local pain; there is severe pain in the waist, groins, flanks, hips, back, chest, and heart (Ch.). There is severe pain at the menstrual periods (Va.).

General treatment:—For the pale discharge, give (1) the paste of the roots of *Tecoma undulata*, in water; (2) give with sugar and honey the paste of the seeds of *Phyllanthus Embelica*; (3) give powder or juice of *Phyllanthus Embelica* fruits; (4) give the decoction of *Ficus bengalensis* with paste of *Symplocos recemosa* (Ch.). (5) Prepare a thick decoction of *Tribulus terrestris* and *Balsamodendron myrrha*; and powders of *Piper nigrum*, *P. longum*, *Terminalia Chebula*, *T. belerica*, *Phyllanthus Embelica*, *Cyperus rotundus*; and make pills; this is useful in derangement due to *Vayu*, and also in strangury, urethral discharges, etc. (Sha.).

(II) PITTA-PRADARA (Acute Cervicitis and Vaginitis; Gonorrhœa?):—It is due to indulgence in sour, saline, and heating substances which aggravate *Pitta* ; after repeated pains there is a bluish, yellowish, black, or very red blood discharge, which is copious and frequent, there is redness of complexion, burning of skin, thirst, swoons, fever, and giddiness (Ch.). There is burning and pulling sensation (Su.).

General Treatment :—*Darvyadi Decoction.*—For the yellow, white, black, red painful discharge ; take decoction of *Berberis asiatica*, dry extract of *Berberis asiatica*, *Cyperus rotundus*, *Semecarpus Anacardium*, *Aegle Marmelos* raw fruit, *Adhatoda Vasica*, and *Swertia Chirata* (Sha.).

Local Treatment :—In case of copious discharge, insert in the vagina (1) strips of lint soaked several times in the decoction of *Ficus bengalensis* mixed with paste of *Symplocos racemosa*, ; (2) a suppository of *Ficus religiosa* bark powder ; (3) apply oil to the vagina and insert sticks of *Symplocos recemosa*, *Aglaia Roxburghiana*, liquorice powder, and honey ; (4) apply oil to the vagina and fumigate with the fumes of a stick made with the paste of *Pinus longifolia* gum, *Balsamodendron myrrh* exudation, barley, oil, *Piper longum Piper nirgrum*, ginger, fish, and ghee (Ch.).

(III) KAPHA-PRADARA (Leucorrhœa) :—This is due to indulgence in heavy foods and drinks ; the 'Menstrual Fluid' is slimy, whitish, thick, oily or cold, and mixed with mucus ; the discharge is accompained by mild pains ; there is vomiting, dyspepsia, nausea, asthma, hiccough, and bronchitis (Ch.). There is much itching but very little pain (Va).

Local Treatment :—(1) *For the slimy, sticky discharge* apply powders of *Cajanus indicus* root, *Rubia cordifolia*, *Mangifera indica*, *Woodfordia floribunda*, iron sulphate, alum, the three myrobalans, and honey (Ch.). (2) *For slimy, copious, filthy discharge*, insert in the vagina paste of barks of *Butea frondosa*, *Shorea robusta*, and *Eugenia Jambolana* ; *Rubia cordifolia*, *Woodfordia floribnnda* flowers. and exudation of *Bombax malabaricum* (Ch.)

GENERAL TREATMENT for the above three *Pradara* should be as usual in deragement of the Humours (Va.). 'Shali' rice, barley, wine, and meat with cholagogue properties is wholesome in these cases (Su.).

(IV) RAKTA-PRADARA ; Syn.—*Kunapgondhi* (Cancer of the Cervix, Uterus, etc.) :—The Fluid has a decomposition or fœtid smell. *General Treatment* :—Give (1) a decoction of *Santalum album*, (2) ghee cooked with the 'Terminalia tomentosa' group of drugs.

Locally give vaginal douches (Va. and Su.)

(V) KAPHAJA AND VATAJA-PRADARA; Syn.—*Granthila* (Sha.) :—Lumps or Blood clots appear in the 'Menstrual Fluid'; there is pain and itching. *General Treatment* :—Give a decoction of *Cissampelos Pareira*, *Piper nigrum*, *Holarrhena antidysenterica* bark, and ginger (Su. and Va.)

(VI) VATAJA AND PITTAJA-PRADARA; Syn.—*Kshina-Pradara* (Sha.) (Amenorrhœa ?) :—The 'Menstrual Fluid' is small in quantity (Sha.); or has less vitality in it; give fattening treatment (Va.).

(VII) RAKTAJA AND PITTAJA-PRADARA; Syn.—*Puyabhu* (Cancer, Ulcer, etc, of the Uterus and Cervix) :—The 'Menstrual Fluid' is like pus; there is boring pain. Treatment same as for *Raktaja-Pradara* (Va., Sha.).

(VIII) SANNIPATAJA-PRADARA; Syn.—*Malabha* (Sha.). (Vesico-vaginal or Recto-vaginal Fistula ?) :—All the three Humours are aggravated (Sha.). *Vayu* deranged and aggravated by excessive loss of 'Menstrual Fluid,' and indulgence in all provocative causes forces the hostile *Kapha* through the ducts of the 'Menstrual Fluid'; the discharge is burnt by the energy of *Pitta*; further, the *Vayu* carries all the Fat (*Meda*), Marrow (*Vasa*), and Root-Principles (*Dhatu*), of the body to the generative organs (Ch.).

Causes (mentioned at the beginning of this Section for *Pradara* in general) are the same in this complaint as in *Sannipataja* type of Disorders of milk (also refer to Pediatrics) (Ch.).

Symptoms :—The colour and smell of the discharge is like feces and urine (Sha.). The discharge is foetid, slimy, and yellowish; the fat and marrow of the body expelled by *Vayu* in the discharge look like ghee or marrow; the discharge is continuous and copious, rarely slight and scanty; there is thirst, burning of the skin, fever, and weakness (Ch.). It is incurable (Va., Ch.).

General Treatment :- Treat with emetics and purgatives, and then give ghee cooked with *Ferula asafœtida* gum, *Andropogon muricatus*, and *Plumbago zeylanica* (Va.).

Local Treatment :—If the smell is fœtid (1) wash the vagina with the decoction of *Cajanus indicus*, or insert its paste into the vagina; (2) insert the powders of *Cinnamomum zeylanicum, C, Tamala*, *Ochrocarpus longifolius*, *Elletaria Cardamomum*, *Cubeba officinalis*, *Aquilaria Agallocha*, *Coryophyllus aromaticus*, *Santalum album*, and camphor (Ch.).

The above *Pradaras* may be Leucorrhœa due to Hydrosalpinx, Cancer of the Vagina, Uterus or Cervix; purulent and muco-purulent gonorrhœa, vaginitis, cervicitis, chronic endometritis, Vaginitis due to *Trichomonas Vaginitis*, breaking down cancer, Recto-vaginal and Vesico-vaginal Fistulae, etc., etc.

Humoral Gynæcology :—

A. General Aetiology, Symptomatology and Therapeutics of Diseases of the Generative Organs.

The term *Yoni* is used collectively or severally to mean the Uterus, the Vagina, and the Vulva.

The diseases of female genital organs may be due to derangement of *Vayu* (1) in a girl of tender years, (2) weak and lean; (3) due to sexual excess, (4) injudicious conduct of life, (5) menstrual disorders, (6) hereditory tendencies, and (7) accident (Su.).

Sushruta describes 20 diseases of the genital organs which differ from Charaka's twenty, in ætiology and symptomatology; Dridhabala drops five diseases mentioned by Sushruta, viz., *Vandhya*, *Vipluta*, *Prasramsini*, *Lohitakshara* and *Atyananda*; he mentions five new ones instead, *viz*,, *Antarmukhi*, *Shushka Yoni*, *Upapluta*, *Arajaska* and *Apraja*. The Diseases due to derangement of definite Humours are thus twenty-five.

Sushruta considers fifteen of the diseases to be due to the three Humours separately,—five due to each Humour, and all the three Humours together for another five diseases. Charaka considers eleven of his list to be due to *Vayu*; three to be due to *Pitta* (*Pittaja*, *Apraja* and *Arajaska*); two to be due to both *Vayu* and *Pitta* (*Paripluta* and *Vamini*); two to be due to *Vayu* and *Kapha* (*Karnini* and *Upapluta*); one to be due to *Kapha* (*Shleshmala*) and one to be due to all the Humours (*Sannipataja*).

Symptoms :—The vagina of a woman with the above diseases never retains the 'Semen'; hence conception never occurs (Ch.) They also suffer severely from other diseases due to derangement of *Vayu*, *Pitta* and *Kapha*; also from tumours (*Rakta-Gulma*). Menorrhagia and Metrorrhagia (*Rakta-Pradara*), Leucorrhœa (*Pradara*), piles, etc. (Ch., Va.). The vagina or uterus, that is displaced, tortures a woman like a thorn or a foreign body (Ch.).

Operative Treatment :—The vagina and uterus should be softened by oils and fomentations and then restored to its normal position; if it has moved out of its place, an organ that is bent (*e.g.*, Retroflexion—*Antarmukhi*) should be straightened by the hand ; if contracted (*e.g.*, *Suchimukhi*), it should be widened ; if it has come out (Prolapse –*Prasramsini*), it should be reduced by manipulation ; if it has spread out (*Mahayoni*), narrow it by pressure (Ch.). Cauterization by alkalis should not be undertaken in these diseases (Su.).

The Diet in all these diseases is alike : 'Sura,' 'Asava,' and 'Arishta' (wines of medicinal drugs) should be prescribed according to the deranged Humour of each case ; give milk and meat soup mainly (Su.).

General Treatment :—In all these diseases (1) give *Vayu*-subduing drugs (Ch.). (2) Treatments of other complaints peculiar to women are also applicable in diseases of the vagina and uterus (Su.). (3) give by mouth every morning the expressed juice of garlic ; (4) take the paste of equal parts of *Piper longum*, *Butea frondosa*, *Nigella sativa* seeds, *Acorus Calamus*, alkali of barley shoots, *Pimpinella involucrata*, *Plumbago zeylanica* root, 'Saindhava' salt, and sugar ; cook with ghee, add the top portion of wine, and drink ; (5) give with wines 'Saindhava' salt, the paste of *Adhatoda Vasica*, *Citrus medica* roots, *Jasminum Sambac* ; (6) give similarly mixed, the paste of *Piper longum* fruit and *Cuminum Cyminum* seeds : (7) PUSHYANUGA POWDER OF ATREYA.—(See under Treatment of Menorrhagia) (Ch) (8) Give decoction of drugs of the 'Ficus bengalensis' group ; (9) LAGHU-PHALA-GHRITA.—Give ghee cooked with cow's milk, and paste of *Barleria cristata* (two kinds), *Terminalia Chebula*, *T. belerica*, *Phyllanthus Embelica*, *Tinospora cordifolia*, *Boerhaavia diffusa*, *Oraxylum indicum*, *Curcuma longa*, *Berberis asiatica*, *Vanda Roxburghii*, *Asparagus racemosus*, and 'Meda' ; it allays pain in displacement of the genital organs, the derangements due to excessive coitus, prolapse of the vagina or the uterus, and helps conception ; (10) KRISHNA-ATREYA'S ASPARAGUS *racemosus Oil.* —Take of *Asparagus recemosus*, *Sida carpinifolia* root, *Desmodium gangeticum*, *Uraria logopoides Ricinus communis* root, *Withania somnifera* root. *Tribulus terrestris*, *Aegle Marmelos* root, *Saccharum spontaneum*, and *Barleria prionitis* ; add an equal quantity of juice of *Asparagus racemosus* oil, and water ; then add powders of *Asparagus racemosus*, *Cedrus Deodara*, *Nordostachys Jatamansi*, *Valeriana Hardwickii*, *Santalum album*, *Fœnaculum vulgare*, *Sida carpinifolia* root, *Saussurea Lappa*, *Elettaria Cardamomum*, *Parmelia perlata*, *Nelumbium speciosum* 'Ridhi', 'Meda,' liquorice, 'Kakoli,' 'Jivaka' ; it allays all pains of the generative organs, and disorders due to *Vayu*, menorrhagia (*Rakta-Pradara*), abdominal pains, headache, jaundice, anæmia, etc. ; (11) apply to the vulva and adjacent parts the paste of the fruits of *Butea frondosa* and *Ficus religiosa* with *Sesamum indicum* seeds oil ; (12) the paste of *Quercus infectoria* and camphor with honey ; these two are good tonics for the genital parts (Sha.). (13) PHALASARPI, PHALA GHRITA. (See under Pediatrics,—Diseases due to Malignant Stars). It is good for all diseases of genital organs, is a good uterine tonic, stimulant to conception, preserves children of those whose children die successively ; it is also useful in diseases due to malignant stars in children, and it makes them fat (Va.).

Local Treatment :—(1) Administer oleaginous medication and fomenations according to the Humour deranged ; (2) insert plugs of medicated cotton-swabs in the vagina ; (3) give proper vaginal medicated and retentive douches (Su.).

Special Treatment of Symptoms.

(*a*) *For piercing pains in the genital organs* give to drink, (1) milk boiled with *Vanda Roxburghii*, *Tribulus terrestris,* and *Adhatoda Vasica*. *Local Treatment*.—(2) wash the part repeatedly with a warm decoction of *Tinospora cordifolia*, the three myrobalans, and *Baliospermum montanum* root ; and put on the part a piece of lint soaked in the same decoction ; (3) insert in the vagina a cotton-swab soaked in paste of *Tabernaemontana dichotoma*, *Saussurea hypoleuca*, *Solanum indicum*, *Pinus Deodara* (Ch.).

(*b*) *Local Treatment for Slimy Discharge from the Vagina.*—Take honey and powders of ferous-sulphate. *Terminalia Chebula*, *T. belerica*, *Phyllanthus Emblica*, *Mangifera indica* seed, *Eugenia Jambolana* seed, *Woodfordia floribunda* flowers ; apply this internally to dry the vagina (Va.).

(*c*) *Local Treatment for Fœtid Discharge and Slimy Vagina* (1) Apply powder of *Butea frondosa* seeds, *Woodfordia floribunda* flowers, *Eugenia Jambolana* bark, *Mimosa pudica*, *Bombax malabaricum* gum and resin ; (2) wash the vagina with the decoction of drugs of 'Cassia Fistula' group (Va.).

B. Detailed Classification.

I. Diseases due to Derangement of Vayu.

(1) VATALA-YONI ; Syn.—*Vataja-Yoni* :—The organ is rough and numbed ; there are aching, and piercing pains (Su.). *Vayu* is aggravated on account of faulty, stimulating diet and regimen, and

incarcerated in the genital organs ; the symptoms are,—piercing and throbbing pains ; rigidity of the parts ; a feeling of creeping of ants ; frothy, thin, and non-oily discharge accompanied by escape of gas, and local pain ; the vagina is painful to touch ; there is a sense of stupefication, and of languor, symptoms of other diseases due to *Vayu* are also evident (Ch.). There is pricking sensation in the vagina ; the discharge is reddish, dark, little and thin ; there is pain in the groins and flanks, and loss of strength ; fever and giddiness, the complaint develops later into a Hæmorrhagic Tumor (*Rakta-Gulma*) and other complaints due to *Vayu* ; the genital organs never get deranged by anything else but *Vayu* (Va.).

General Treatment :—(1) *Tinospora cordifolia*, *Jasminum grandiflorum*, *Vanda Roxburghii*, *Sida carpinifolia*, liquorice, *Plumbago zeylanica*, *Solanum xanthocarpum*, *Pinus Deodara*, *Jasminum auriculatum* ; take paste of one part of each of these, cow's urine 160 parts, milk 160 parts, and cook with 40 parts of milk ; sprinkle the oil over the affected region, or massage with the oil, or insert in the vagina a cotton-swab soaked in the oil and change it frequently ; (2) insert in the vagina a warm paste of *Solanum xanthocarpum*, after applying oil to the part ; (3) take one part each of *Gmelina arborea*, the three myrobalans, raisins, *Cassia sophera*, *Grewia asiatica*, *Boerhaavia diffusa*, *Curcuma longa*, *Berberis asiatica*, *Asclepias curassavica*, *Berberis cristata*, *Asparagus racemosus*, *Tinospora cordifolia*, with 80 parts of ghee, and cook ; use as a draught ; (4) in diseases due to *Vayu* and *Pitta* —ghee 200 parts cooked with one part of each of the drugs of 'Jivaniya' group, *Asparagus racemosus*, raisins, *Grewia asiatica* fruit, *Buchanania latifolia*. *Bassia longifolia*, liquorice, juice of 1,600 parts of *Asparagus racemosus* roots, and 1600 parts of milk ; add, when cool, 64 parts of honey, *Piper longum* fruit powder 32 parts, and sugar 40 parts ; give to eat one ounce each time ; it is an aphrodisiac and helps conception ; this medicine also cures the diseases of blood, of 'Semen,' ulcers of the chest, consumptions, hæmorrhagic diathesis, insanity, anæmia, etc. ; (5) give milk and ghee cooked with the ten drugs of 'Jivaniya' group ; this is also helpful in disease of the organ, due to Pitta alone, and helps conception ; (6) boil one part of ghee and one part of oil in eight parts of the decoction of *Sida cordifolia*, one part of the paste of *Convolvulus paniculatus*, *Asclepias rosea*, *Cologyne ovalis*, 'Kakoli,' 'Rishabhaka,' *Tinospora cordifolia*, *Spaeranthus hirtus*, roots of *Piper longum*, fruits of *Salvadora indica*, *Glycine debilis*, sugar, 'Kshirkakoli,' *Asclapias curassavica*, cooked with 4 parts of milk; give to drink according to strength of the person (Ch.). (7) Give to drink 'Sida carpinifolia' Oil (Va.),

Local Treatment :—Foment the part with flesh of aquatic animals and of those of marshy places; (2) poultice the part with drugs of the 'Sweet' group; or (3) with boneless pasted flesh cooked and mixed with treacle, ghee, *Piper longum*, and *P. nigrum*; (4) use vaginal lotions, washes, and filling in pastes (*Purana*) of *Vayu*-subduing drugs; (5) use cooling measures in cases of dryness and sucking pain (Su.). (6) Give oleaginous medication (*Snehana*), fomentations, enemas, etc., suited to alleviate *Vayu*; (7) prepare a hot decoction of the flesh of aquatic animals and of those that live in marshy regions, milk and rice, sesamum seeds, and other *Vayu* subduing drugs, and foment the part with the emanating hot steam conducted to the part by means of a tube; or put the decoction in a wide-mouthed pot and foment with the vapour; (8) apply to the body oil mixed with salt, and foment to induce local diaphoresis by the method mentioned as *Ashma*, *Prastara*, or *Sankara*; then after a hot bath, give a meal of *Vayu*-destroying meats (Ch.); (9) insert in the vagina a cotton-swab soaked in oil cooked with *Valeriana Hardwickii*, *Solanum indicum*, *Saussurea Lappa*, *Cedrus Deodara*, and 'Saindhava' salt (Va)

(*ii*) UDAVARTA; Syn.—*Udavritta* (Va.), *Udavartini* (Ch), (Dysmenorrhœa, acute antiflexion, Retro-version) :—There is a painful discharge, and menses are frothy; there is aching and piercing pain (Su.). Sppression of the urgings of nature aggravates *Vayu*, which overturns the organ and diverts the menstrual flow upwards; there is great pain at the menstrual periods; with the discharge of menstrual blood, there is immediate relief (Ch.). (Refer in Obstetrics Section to *Udavarta* or constipation occurring in the in the 8th month of pregnancy).

General Treatment :—If pains are due to *Vayu*, (1) give oil of *Convoloulus turpethum*; (2) give juice of flesh of domesticated animals, acquatic animals, and animals that live in marshy places (Ch.).

(*To be continued.*)

Current Topics.

CONCERNING LIPS & MOUTHS

Some Literary References

"The mouth is the instrument for the first intimate exchange for all love feelings, because it is the organ with which the first kiss is given."

When it comes to kissing it will be generally conceded that those with full, fresh, juicy lips have a greater advantage than those whose lips are thin and dry, or those who suffer from prominent teeth which interfere with the contact of the lips. No lips stretched over protruding teeth can be attractive. Thick, soft lips are simply made for kissing.

"I've said it before,
And they'll say it again,
My love's lip's the sweetest
You ever have seen."
—F. A. Wright.

Petronius describes a woman who is attractive, from a kissing point of view as a lovely "kissing-piece". What a man instinctively desires is the soft and rounded chin in the girl he kisses. The other kind of chin is apt to get in the way.

Thin lips become none but shrews or niggards. Narrow, compressed, pale lips are supposed to be signs of a nasty temper and a bad character. A rosiness beyond that of cheeks, and a good-tempered sufficiency and plumpness, are indispensalbe requisites of a good mouth.

"Her lips no living bard, I weet,
May say how red, how round, how sweet ;
Old Homer only could indite
Their vagrant grace, and soft delight."
—Matthew Prior.

Chaucer, a great judge, is very peremptory in this matter :—

"With pregnant lippes, thick to kiss perchase ;
For lippes thin, not fat, but ever lean,
They serve of naught ; they be not worth a bean ;
For if the base be full, there is delight.',
—"The Court of Love."

The mouth is the instrument for the first intimate exchange for all love feelings, because it is the organ with which the first kiss is given. Its size depends chiefly on the shape of the lips. Their width and thickness are of great importance. The perfect mouth should be neither too large nor too small. It should be in proportion to the face. The lips, shaped in a Cupid's bow, should be ruby red and pleasantly full.

"I see her bring a crimson mouth
To open at a kiss, and close."
—William H. Davies.

A KISSING CLUB

The most beautiful mouths of all are sometimes to be found on women who are not otherwise lovely. Provided a woman has a beautiful mouth, what man will pause to reflect—while he is kissing, or wanting to kiss her,—that she has thick ankles, large feet or a flat chest ?

An enterprising Frenchman is said to have founded a "Kissing Club" in London which, he stated, was "mainly for the benefit of the unkissed".

"Some people get all the kissing they want", he said, "and some do not get any at all. And it is a funny thing that sometimes the people whom no one wants to kiss, make the best kissers in the world. And this club is to give a chance of trying out the people who are not kissed in a general way, and seeing how they get on." A visitor to the club relates how one girl, who was singularly unattractive to look at and who appeared to be utterly lacking in feminine allure, after (according to the rules of the club) the different male members had kissed her and had been kissed by her in return, became one of the most popular members and was always in demand.

THE BEAUTIFUL AND THE KISSABLE

It must be remembered that beautiful women are not always the most ardent or passionate. Two things that play an important part in the execution of a kiss.

In 1871, M. Collins wrote : "Her.........quite kissable mouth." Twenty years later Kipling wrote in the "Light that Failed" : "Maisie looked more than usually kissable." In the "Song of Solomon," we read, "His cheeks are as red as a bed of spices, as sweet as flowers : his lips like lilies, dropping sweet smelling myrr." And again, "His mouth is most sweet."

In the seventh century Kurroglou, a Turkman Tuka, and a native of Northern Khorassan, sang : "Her lips are made for sucking." In one of the songs of Ghilanis we read : "Maidens' lips are cardamoms and cloves. Sweet maidens, offer them as presents to young men."

As early as the second century B. C. Dioscorides wrote :—

"O for those rosy musical lips thine,
Bewitching doorway of that mouth divine."

ANCIENT WRITER ON LARGE LIPS.

A grave old commentator, Dionysius Lambinus, in his notes upon Lucretius, tells us, with all the authority of experience, that girls who have large lips kiss infinitely sweeter than others ! "*Suavius viros* *osculantur puellae labiosae, quam qvae sunt brevibus labris.*" And Aeneas Sylvius, in his story of the loves of Eurylus and Lucretia, where he particularizes the beauties of the heroine, describes her lips as exquisitely adapted for biting. "Os parvum decensque, labia corallini coloris ad morsum aptissima." Epist. 114. Lib. I. Lucretius himself wrote:—

> "And the broad-lipp'd, a Nymph for kisses form'd."

In the sixteenth century Sir Philip Sidney wrote: "Thy most kiss-worthy face." He is also responsible for the following lines:—

> "Yet those lips, so sweetly smelling,
> Do invite a stealing kiss."

Again we read: "(Her lips) suggested to a critical eye the distinct notion of kissability."—G. Allen. *Philistia* I. 11. 51.

When the word "women" is mentioned, a man instinctively pictures a woman with a mouth that mutely asks to be kissed.

The sweet-lipped girl nearly always has a sweet disposition. The woman who is generous and sympathetic, yet merry withal, has lips of inviting contour.

REDDENING THE LIPS

Swinburne wrote of a "Sweet red splendid kissing mouth." And Nott speaks of "luscious lips of crimson dye." Redness in the lips is always considered a sign of beauty and is frequently referred to when describing the attractions of the fair sex.

> "Round thy lips and red as be
> Apples on the apple-tree."
> —J. A. Symonds.

Six thousand years ago Egyptian and Assyrian beauties rouged their lips. A lip-lotion is recommended in an old book published in Venice in 1510, "ashes of hairs plucked from a horse's tail mixed with an equal portion of honey." Eastern beauties at all times have, and still do, find a substitute for the lip stick of the twentieth-century woman in the scarlet juice of prepared betel nut.

John Wilmot, the famous Earl of Rochester, after he had been banished from the Court of King Charles, set up in Tower Street as a specialist. He advertised that lips could be made of "the colour of coral and as soft as you could wish for your lawful kisses."

In the opinion of some people heavily painted lips, no matter how thick, are very alluring and inviting. However it is not every man who is content to be put off with artificial redness and there are some who will sing with the bard:—

> "Take—oh take—those lips away;
> Once I thought your vision sainted.
> Now it is as clear as day
> That your ruddy lips are painted."

Large lips do not necessarily mean a large mouth but rather that they are broad and consequently afford an ample kissing surface, and the general opinion seems to be that :—

"The best mouth to kiss is of medium size
Moist lips, half-parted, inviting eyes."

It is said that lips that are thick, soft and long, denote the person to be much addicted to the pleasure of kissing, and scarcely moderate in the enjoyment of them. Thick and prominent lips, especially wide upper lips, are regarded as signs of great sensuality. Certain women are said to be attracted to a man because his mouth suggests a fine capacity for kissing.

KISS PROVOKING LIPS

An old English proverb says : "A lisping lass is good to kiss." There are certain kinds of lips which can only be described as "kiss provoking" and Moore aptly calls them "buds of temptation."

"I ne'er on that lip for a minute have gazed,
But a thousand temptations beset me,
And I've thought, as the dear little rubies you raised,
How delicious 'twould be—if you'd let me !
Then be not so angry for what I have done,
Nor say that you've sworn to forget me ;
They were buds of temptation too pouting to shun
And I thought—you could not but let me !"

—Moore.

In 1888 J. C. Jeaffreson wrote : "The lips that curled so kissably." (Lady Hamilton and Lord Nelson.) And Shakespeare says : "Thy lips, those kissing cherries, tempting grow !" Anacreon beautifully describes a lip as "a lip like 'Persuasion's' ", and says it calls upon us to kiss it.

Another poet, overcome by the attractions of his beloved's lips, commands :

"Drop those pouting lips to mine,
Those ripe, those coral lips of thine."

De Maupassant wrote : "When our artists sought for the rarest and the purest form for the quaffing bowl—wherein Art could drink to inebriety—what did they choose ? They chose a woman's lips of which the flower resembles that of the rose.

"The drooping, petulant mouth of a very young and pretty girl may have an appeal, but add a few years and nothing is more unattractive.

"There are mouths that curve with lustful ardour, and "pomegranate mouths that breathe out poisoned passion."

In the Pall Mall Magazine of 7th September 1892, we read : "She pouted her lips kissingly." In former days the pouting of lips was described as "Lips kisswise set."

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Alfred Edye wrote in "Woman's Ways and Wiles": "There are women whose mouths were never given them for the good of their souls. They seem made for kissing. Every movement of their lips appears to invite a kiss, although one knows, of course, that they are quite unaware of the fact! They cannot help pursing up their mouths in that particular way.

The mouth *de luxe* for kisses! Some Englishwomen have it in perfection, and so no doubt have women of every nationality. But it is most in evidence in Italy.

I think the typically Italian mouth is the most kissable of all. You may see it anywhere—in peasant girls, shop girls, and women of high degree.

The Frenchwoman's mouth is often a little mercantile, the Spanish and Portuguese apt to be a little too full and too voluptuous. The Italian mouth is adorable.

In the seventeenth century an anonymous poet wrote :—

> "Your cherry lips, red, soft, and sweet,
> Proclaim such fruit for taste is meet."

Not long ago a Bombay Cinema organised a kissing contest. Cards were distributed with the imprint of Norma Shearer's kiss when she kissed a certain film star, and patrons were invited to use plenty of lipstick and register the impression of their kiss within the dotted line. The first few people, the impression of whose lips came nearest the model, were given prizes.

It does not follow that the man or woman who is the possessor of an apparently ideal mouth, from the kissing point of view, will be an accomplished kisser, for the mouth is only an instrument and a great deal depends on how the instrument is used.

> "A twin may be in all respects
> The image of his brother,
> Alike in virtues and defects
> As one pea to another.
>
> But one point of resemblance there
> It seems is always missing,
> And that is, as the girls declare,
> The way each does his kissing!" (*H. W.*)

———

GLYCERIN AND SODIUM HYDNOCARPATE TREATMENT OF LEPROSY.

J. T. Jackson (*Leprosy Review*, through *B. M. J.*) comments on the value of glycerin as regards the alleviation of the pain reaction in the subcutaneous administration of sodium hydnocarpate. The strength of the solution generally employed is 2.5 c.cm. of pure double distilled glycerin to 100 c.cm. of 3 per cent. sodium hydnocarpate solution containing 0·5 per cent. of carbolic acid. The pain is not abolished, but it is often markedly reduced; this is attributed to the good penetrating power of glycerin and the soothing effect it exercises on irritated tissues. The author describes an investigation designed to estimate the degree of pain reduction on similar lines to those of his previously reported study of the effects caused by different fractions of sodium hydnocarpate in solutions of varying hydrogen-ion concentration. He found that the average decrease in the "pain-factor" was 55·4 per cent., the minimum decrease being 44·7 and the maximum 71·6. He believes that maximum could be raised by increasing the strength of the glycerin solution, since it has been shown that the pain following the injection of solutions of sodium hydnocarpate has no direct relation to the *p*H of the solutions employed, nor to the use of different batches and products of this salt.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.

DIPLOMA IN BIOCHEMICAL ANALYSIS.

A course of instruction leading up to the examination for the diploma in biochemical analysis has been arranged at the Society's School in Bloomsbury Square, London. The course, which will be held on Wednesday and Friday evenings at 6-30, will commence on Wednesday, January 4th, 1933, and, with the exception of the Easter Vacation, will continue until the end of June. The couse will be conducted by G. A. Harrison, B.A. M.D., Reader in *Pathological* Chemistry, University of London, Director of the Department of Pathological Chemistry, St. Bartholomew's Hospital. The examination this year will be held as soon after the finish of the course as can conveniently be arranged. The fee for the course of about forty-five periods, each of three-hour duration, is 10 guineas, and for the examination 5 guineas, The examination comprises one three-hour written paper, two three-hour practical papers, and and an oral period. Candidates for the examination must be members of the Society. Any person interested in these arrangements will be supplied with a copy of the Regulations and Syllabus on application to the Secretary. Those wishing to attend the course should give notice of their intention at the earliest opportunity in order that adequate accommodation can be assured.

Books required :—

"Lessons in Elementary Physiology," Huxley. (Macmillan and Co., 6s.)

"Chemical Methods in Clinical Medicine," Harrison. (J. and A. Churchill, 18s.)

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